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ABSTRACT

This study examined the effects of family size on a sample of some 5000 students in Bayamon, Puerto Rico and examined the effects of family size and spacing on some 537 families in four suburban towns near Boston. It was found that there were major effects of both socio-economic status and religion on family size, but that the direction of the effect was opposite in the two samples. In the U.S. higher status families tended to have more children than their counterparts in Puerto Rico. In the U.S. non-Catholics tended to have smaller families than the Catholics, while in Puerto Rico the non-Catholics had the larger families. Both in Puerto Rico and the U.S. small family mothers were more likely to have worked both prior to and after marriage than large family mothers. In both cultures small family children felt more accepted by their parents. Generally, small family children in both cultures were more intelligent and did better in school than did large family children. American children distantly spaced from the next youngest child were more oriented toward college. When two children were closely spaced, the older was more authoritarian and the younger was more obedient, serious, emotionally stable, and careless of protocol. Both younger and older siblings were less intelligent if they were closely spaced. (Author/JM)

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Ronald L. Nuttall, Ph.D.
Ena Vazquez Nuttall, Ed.D.
Laboratory for Statistical
and Policy Research
Boston College
Chestnut Hill, Massachusetts

FAMILY SIZE AND SPACING IN THE UNITED STATES AND PUERTO RICO

March 1975

The Center for Population Research
National Institute of Child Health and Human Development
U.S. Department of Health, Education and Welfare

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National Institute of Child Health and Human Development

Principal Investigators:

RONALD L. NUTTALL, Ph.D.

and

ENA VAZQUEZ NUTTALL, Ed.D.

with

Karen Clark, M.A.

Elizabeth S. Johnson, M.A.

Joan B. Hunter, M.Ed.

Phyllis R. Sweet, Ph.D.

LABORATORY FOR STATISTICAL AND POLICY RESEARCH

Boston College

Chestnut Hill, Massachusetts 02167

ABSTRACT

This study examined the effects of family size on a sample of some 5,000 students in Bayamon, Puerto Rico and examined the effects of family size and spacing on some 537 families in four suburban towns near Boston.

It was found that there were major effects of both socio-economic status and religion on family size, but that the direction of the effect was opposite in the two samples. In the United States higher status families tended to have more children than their counterparts in Puerto Rico. In the United States non-Catholics tended to have smaller families than the Catholics, while in Puerto Rico the non-Catholics had the larger families. These disparate results were reconciled by postulating a U-shaped relationship between fertility and socio-economic status which included a hypothesized relation between increased fertility and minority religious affiliation.

Both in Puerto Rico and the United States, small family mothers were more likely to have worked both prior to and after marriage than large family mothers. The large families tended to have been more geographically stable than were the small families. American small family parents tended to spend more time in adult oriented leisure time activities, while parents of large families were more oriented toward attending or participating in sports events and other activities of a family nature. In the American sample, the extent to which the woman worked and the age of the youngest child has strong effects on leisure time activities. In families where the mother worked, the leisure time activities of the two spouses were more similar and less sex-typed than if she did not.

Small family mothers tended to be better educated than large family mothers in the United States Sample, while large family fathers tended to be better educated than the fathers of small families.

In both cultures small family children felt more accepted by their parents. In contrast to two-child family girls, Puerto Rican only-child girls perceived their fathers as less accepting of them. In Puerto Rico there was an indication that as family size increased up to the sixth child, fathers were more acceptant than were mothers. After the sixth child acceptance dropped sharply for both parents.

In the American sample it was found that children were less intelligent when they were closely spaced. The younger children were more intelligent when their next oldest sibling was spaced between 19 and 30 months. Older children were more intelligent when the next youngest child was more than 30 months younger.

Generally small family children in both cultures were more intelligent and did better in school than did large family children. Moreover American small family children felt more valued and accepted, more obedient and law-abiding, tended to work harder and more effectively, felt more capable, more confident academically and more ambitious than large family children.

In general, American children with quite distant spacing to the next youngest child, besides being more intelligent, were also more oriented toward college. Children closely spaced to the next oldest child were more athletic, less interested in school, yet aiming for higher occupations. When two children were closely spaced, the older was more authoritatian and the younger was more obedient, serious and sober, emotionally stable, and careless of protocol. Both younger and older siblings were less intelligent if they were closely spaced.

FOREWORD

We would like to express our sincere appriciation to the many people who helped us during the course of this investigation. We are especially indebted to the families who participated in the study who gave so generously of their time and effort . The mothers who welcomed us into their homes and received us with great hospitality will always be remembered. The cooperation of the teenage children who so diligently worked to complete all the long questionnaires is gratefully acknowledged. The assistance of the fathers who gave of their time to answer our questionnaire is greatly appreciated.

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The typing done during this project was the product of many hands among them those of Delores Perry, Marie Eames, Ethel Yukes, Evelyn Villafane, Betty Richardson, and Patricia Cramblitt. Mr. Carl Ostermann assisted with the preparation of some of the graphs that appear in the manuscript.

All the people we have mentioned and others we may have failed to remember have cooperated with us and assisted us in the fulfillment of this endeavor. If in any way this document and others to follow enlighten the marriage and family plans of teenagers and young adults, their efforts will be rewarded. However any errors or mistakes present in in this document are our sole responsibility.

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CHAPTER I INTRODUCTION

This monograph reports on research on family size as it affects both parents and children in both the United States and in Puerto Rico. Data were first collected in 1968 in Puerto Rico. These data have been reported elsewhere (Nuttall, Nuttall, and Sweet, 1971). A new set of data was collected in 1972-73 in the Boston area. This monograph reports on both sets of data. In the Puerto Rican study some 5,000 students attending junior and senior high schools in the Bayamón Norte school district filled out some seventeen instruments. Included in these instruments were questions about their parent-child relationships, personality, aims and goals in life, attitude toward school, educational and occupational aspirations, leisure time activities and friends, and health.

In the Boston study the bulk of the instruments used with the Puerto Rican children were used for over 500 junior and senior high school students living in four suburbs of Boston. The sampling procedures were somewhat different in Boston than they were in Puerto Rico as will be explained in greater detail in the chapter on Methodology. In Boston the Puerto Rican study was replicated with the children, and extended to the mother and father of each child. This allowed much greater attention to be given to the effects of family size on the parents. Interviews were conducted with the mothers and a questionnaire was administered to the fathers.

This design allows for a cross-cultural comparison of the major results in the two samples. In addition the Boston study included the variable of child spacing so that it was possible to examine the effects not only of family size, but also of child spacing on both parents and children.

Our studies had four main foci:

1) Correlates of family size on parents,
2) Correlates of child spacing on parents,
3) Correlates of family size on children, and
4) Correlates of child spacing on children.

For the parents it was predicted that family size would be correlated with variables in the realms of socio-economic status, educational attainment, religion, geographic mobility, age at marriage, recreation patterns, saving and investment patterns, parent-child interaction, community participation and self-actualization, and others.

With the children family size correlates were expected in the realms of parent-child interaction, academic achievement, family size preferences, expected age at marriage, educational and vocational plans, hours of study per week, social participation, personality, anxiety and attitude toward school, and others.

In brief then, this research was designed to study the effects of family size and child spacing on the lives of both parents and children. The research findings obtained should provide young married couples who are planning their families with information about the probable effects of the various family structures they may choose. They will know some of the advantages and disadvantages of each family structure and will be able to choose the family structure which is most satisfactory to them. For those families whose family structure is already a fact, these results will alert them to some of the disadvantages of their family structure and will allow them to take action to minimize these disadvantages.

By knowing what some of the goals are which couples see as alternatives to additional children, the social planner will be able to know what actions in terms of public policy will tend to increase or to decrease the number of children which couples will want to have. For example, since family size is strongly affected by the number of years before marriage a woman has worked and by graduate school education as well as work participation after marriage, the social planner may pay attention to the work and graduate school educational opportunities for women.

The cross-cultural aspect of the study greatly aids in the generalization of the findings. For some effects, the results in the Boston and in the Bayamón data were highly similar, for other effects they were in fact opposite. These results then assist the social policy maker in understanding some of the strengths and cautions needed to apply these findings in other contexts.

CHAPTER II HYPOTHESES

There were four major areas or specific aims which the research tried to answer. These can be put in terms of four questions:

A. How do families with many or few children differ?,

B. How do large and small families with closely spaced children differ from large and small families with children spaced far apart?,

C. How do children from large and small families differ?, and

D. How do children of closely spaced families differ from children from distantly spaced families?.

In this chapter the specific hypotheses in each of these areas will be outlined. In the chapters on the results, these hypotheses will be tested.

A. How do families with many or few children differ?

In this section the main intention was to study how parents who have small families differed from parents who had large families.

In terms of socio-economic status, it was predicted that the fathers of the smaller families would have higher socio-economic status as indicated by their occupational level, their educational level, financial status, and their ownership of telephones, radios, televisions, automobiles, and the value of their home. It was also predicted that the smaller families would have a better ratio of number of rooms per person in the family.

We expected that mothers of small families would be more likely to work outside the home, to be better educated, and if working to hold an occupation of higher social status and to have worked for a longer period of time than had mothers of large families.

In terms of religion, we expected the parents of the smaller families to more likely be Protestant or Jewish than Catholic. We predicted that there would be an interaction between social status and religion with the highest and lowest socio-economic classes who are Catholic, having a higher fertility ratio than Catholics of middle socio-economic status. This interaction would be related, we felt, to the degree of religiosity of the parents. In general we expected that the Catholics who reported greater involvement and interest in their faith would have the largest families regardless of the social class to which they belonged. This same relationship of religiosity being associated with large family size was not expected to hold for the Protestant and Jewish families.

Families who had extensive geographic mobility, especially those who were born or raised in rural areas before moving to the suburban towns were expected to be more likely to have large families than were those families who had moved relatively little. On the other hand it was predicted that families who had many family ties close by would tend to have large families. In general, it was predicted that the more a family was integrated into a community by years of residence and family ties, the more likely they would be to procreate a large number of children.

We felt that the older the age at marriage of the parents, the more likely they would be to have a small family. The larger the family of origin in which they grew up, the more likely they would be to have a large family themselves.

In terms of use of time, we predicted that the parents of the small families would probably attend more cultural activities of an expensive and adult-oriented nature such as theatre, opera, and skiing. They should also tend to be more able to travel abroad than the parents of large families. We felt that the parents of the big families would favor recreation which was child oriented, involved the whole family, and was less expensive in nature such as camping and drive-in movies. Parents of all families were expected to tend to entertain relatives or friends with similar sized families. Thus, small family parents should have small family couples as friends, while large family parents should be friends with couples who also have large families. On the whole, it was also expected that the small family parents would have a more active, varied, and mobile social life than would large families.

Economically, parents of the small families, especially where the wife works would tend to save and invest more than would the parents of large families. The small family parents were expected to borrow minimally and to be more financially comfortable than were the parents of big families.

Regarding parent-child interaction, we predicted that the parents of large families would tend to be less acceptant, more firm, and more psychologically controlling than the small family parents.

It was predicted that greater self-actualization would be easier to achieve by the small family parents. They were expected to have more outside interests such as strong involvement in professional, political, artistic, athletic or social organizations. The parents of the small families were expected to participate more in voluntary formal organizations of all kinds, with the possible exception of religious ones. There was expected to be a tendency for both parents to be involved in some area or to pursue a special interest outside the home among the small family parents. Large family parents were expected to participate less in voluntary organizations and where they did participate, it was expected that it would be only the father who participated.

B. How do large and small families with closely spaced children differ from large and small families with children spaced far apart?

In order to understand the effects of child spacing, the obtained size of the family has to be taken into consideration. Thus for small families (2-3 children) closely spaced children do not have the same effect as closely spaced large families.

It was predicted that small families with well-spaced children (3 years or more) would tend to be more characteristic of the higher socio-economic strata. A small, well-spaced family was seen as more likely to be headed by well-educated parents who were aware of the personal goals they would like to find in life and knowledgeable about birth control methods. Such families were expected to be more likely to be Jewish or Protestant rather than Catholic. In these small-well spaced families, the mother was expected to work full-time or part-time intermittently while the children were young and to continue some kind of work committment while the children grew.

Parents of the small well-spaced families were predicted to be consistently accepting of their children, autonomy granting, and lax rather than firm in their discipline. The parents of small well-spaced families were expected to be more satisfied with their family life and to feel that they had been able to accomplish many of their goals in life.

Small families with closely spaced children (1-2 years) could be the product of poorly controlled fertility or of the voluntary intention of the parents. If intentionally planned, small families with closely spaced children were expected to predominate among late married middle and upper class couples. Young middle and upper class couples who believe that children are happier when they are raised close together are also likely candidates for this type of family structure.

Closely spaced small families were expected among well educated women who would like to get the brunt of the child-rearing done in one continuous period of time so as to be able to reintegrate themselves into the work force. Mothers of closely spaced children were expected to abandon their work commitment totally during the early years of child rearing. These parents were seen as tending to be less acceptant of their children in these early years but as tending to grow gradually more acceptant of the children as the years passed.

It was expected that parents with large families of closely spaced children (1-2 years) would be expected to be either Catholic, of rural origin, or be of Protestant religion but low socio-economic status and education. They were predicted to by highly integrated into the community, and to have the mother characterized by having little or no work history. It was expected that these parents, especially if not deeply religious Catholics, would tend to be more rejectant and more psychologically controlling of their children than would be parents of other family arrangements.

Parents with large families of distantly spaced children were expected to be highly integrated into the community. Such family structures were expected to be popular among high socio-economic status families as well as among well educated Catholic families with a concomitant knowledge of birth control methods. Mothers of this type of family were predicted to have no, or very few years of work history. These parents were expected to tend to be more acceptant of their children than were mothers of similarly large but more closely spaced families.

C. How do children from large and small families differ?

While the parents were the focus of the first part of the research, the children constituted the focus for the second half. The basic question was what are the social psychological effects of growing up in a large family as opposed to growing up in a small one?

Considering first how a child perceives his relationships with his parents, we expected that the child from a smaller family would see his parents as more accepting and less rejecting. He should also see his parents as exercising greater psychological control over him, while the child from a large family is likely to experience greater autonomy. The large-family child would tend to perceive his parents as firmer disciplinarians, while the small-family child would more likely report that his parents are using lax discipline.

In terms of academic achievement, we expected that the small family child would achieve better as indicated by his grade-point average. We expected this relationship between family size and achievement to hold even after socio-economic status was statistically controlled. The small-family child, in contrast to the large-family child was expected to plan to have fewer children of his own and to plan to control the spacing of the children he (or she) does have. The large-family child was expected to plan to have a larger number of children and to be more likely to expect to have as many children as God might send.

However, we expected that sibling order would have some effect. For example, the oldest siblings in large families were expected to be more likely to plan their families and to expect to have smaller families than would other siblings in large families. Likewise, the one-child family child was expected to plan to have a larger family than the one in which he or she was reared.

The large-family child was expected to plan to get married somewhat earlier than the small-family child. However, in the very highest socio-economic levels, the large-family child was expected to plan to marry later than the small-family child of similar status. This relationship should be explained when planned family size and degree of religiosity are taken into account.

On the whole the large-family child was expected to be less likely to plan to go to college or to reach for a high occupational level than was the small-family child. Here the socio-economic status of the family of origin was expected to exert a strong influence. Thus the overall relationship between family size and occupational aspiration would have to be examined holding socio-economic status constant.

The small-family child was predicted to report that he spends more hours per week studying and more hours per week on chores around the home than does the large-family child. It was expected that there would be an exception here in that the oldest siblings in large families would probably report more hours spent in home chores.

Regarding social participation and family size, two different hypotheses were formulated. The first hypothesis followed Bossard and Boll's (1956) argument that children in large families have greater opportunity for early and continuous participation in groups so that they (holding socio-economic status constant) would tend to belong to more organizations and to participate in them more intensively than small-family children. Furthermore the large-family child was expected to report spending more time with members of the opposite sex. The second alternative hypothesis depends on the argument that because small-family children are forced to look outside the family circle for friends, they learn early in life to relate to outsiders and to participate socially. These conditions would lead us to expect that small-family children would tend to belong more to voluntary organizations and to participate in them more intensively. In addition, the small-family child was expected to report spending more time with members of the opposite sex under this second hypothesis. The research should support one or the other of these hypotheses.

The small-family child, because of his predicted better school performance, was expected to report having more of his "best" friends at school than would the large-family child. Regarding the complex relationship between family size and social participation, the degree of parental participation in voluntary organizations was expected to affect the social participation of the children.

On the whole the small-family child was predicted to have a more positive attitude toward school than did the large-family child. Similarly, the small-family child was expected to be less interested in leaving school and going to work than was the large-family child. It was expected that the large-family child would be more likely to feel that working would be better than staying in school.

Turning to the personality realm, we expected the small-family child, in contrast to the large-family child to be as indicated in Table II-1. These are the personality dimensions of the Cattell High School Personality Questionnaire (HSPQ). In addition it was predicted that the small-family child, in contrast to the large-family child, would be less Authoritarian (F-Scale), less Dogmatic (D-Scale), more Test Anxious, have a tendency toward a lower Social Desirability Score, and would be more Internally Controlled rather than Externally Controlled.

Table II-1

Personality Factors Differing in Large and Small-Family Children

Small-Family Children	Large-Family Children
RESERVED, Detached, Critical, Cool	OUTGOING, Warmhearted, Easygoing, Participating
MORE INTELLIGENT, Abstract-Thinking, Bright, of Higher Scholastic Mental Ability	LESS INTELLIGENT, Concrete-Thinking, of Lower Scholastic Mental Ability
EMOTIONALLY STABLE, Faces Reality, Calm, of Higher Ego Strength	AFFECTED BY FEELINGS, Emotionally Less Stable, Easily Upset, Changeable, of Lower Ego Strength
PHLEGMATIC, Deliberate, Stodgy, Inactive	EXCITABLE, Impatient, Demanding, Overactive
OBEDIENT, Mild, Conforming, Submissive	ASSERTIVE, Independent, Aggresive, Stubborn, Dominant
SOBER, Prudent, Serious, Taciturn	HAPPY-GO-LUCKY, Gay, Enthusiastic, Impulsively Lively
CONSCIENTIOUS, Persevering, Staid, Rule-Bound, Has Stronger Superego Strength	EXPEDIENT, Evades Rules, Feels Few Obligations, Has Weaker Superego Strength
SHY, Restrained, Diffident, Timid	VENTURESOME, Socially Bold, Uninhibited, Spontaneous
TENDER-MINDED, Dependent, Over-Protected, Sensitive	TOUGH-MINDED, Self-Reliant, Realistic, No-Nonsense
DOUBTING, Obstructive, Individualistic, Reflective, Internally Restrained, Unwilling to Act	VIGOROUS, Goes Readily with Group, Zestful, Given to Action
APPREHENSIVE, Worrying, Depressive, Troubled, Guilt Prone	PLACID, Confident, Serene, Untroubled
SELF-SUFFICIENT, Prefers Own Decisions, Resourceful	GROUP-DEPENDENT, A "Joiner" and Sound Follower
CONTROLLED, Socially-Precise, Self-Disciplined, Compulsive, Has High Self-Concept Control	UNDISCIPLINED SELF-CONFLICT, Careless of Protocol, Follows Own Urges, Has Low Integration
TENSE, Driven, Overwrought, Frustrated	RELAXED, Tranquil, Torpid, Unfrustrated

These hypotheses about the effect of growing up in a small rather than a large family can be summarized as follows. We expected that the small-family child as contrasted to the large-family child, would see his parents as more: Accepting, as exercising greater Psychological Control, and as being stronger on Firm Discipline. The academic achievement of the small-family child was expected to be somewhat higher, and his plans for higher education and occupational attainment to be somewhat greater that those of the large-family child. The small-family child was expected to plan to have fewer children himself and to be more likely to plan the number of the children in his family. It was expected that there might be an interaction between sex and sibling order in that the oldest siblings, especially girls, in a large family would be likely to plan to have fewer children of their own.

The hours of studying and hours of home chores were expected to be greater for the small-family child, again with the exception that the oldest siblings in a large family would report more home chores.

In general, it was predicted that growing up in a large family would lead to a personality which was more group-dependent, more extroverted, and less controlled than was the personality of children growing up in a small family.

D. How do children of closely spaced families differ from children from distantly spaced families?

In examining the effect of child spacing on children, several other variables need to be considered. The size of the family is of particular importance, as is the sex of the child and his sibling position. Other aspects of importance are the sexes of the other siblings and whether child spacing is measured to the next oldest child or to the next youngest child.

It was predicted that first born boys who were raised in small, well-spaced families would tend to be more intelligent and to be better school achievers than were later born boys from small but closely spaced families. The sex of the sibling who follows the first-born was not seen as affecting greatly the development of the first-born. However, the intellectual development of a second-born girl was expected to be greatly enhanced if she was closely spaced with an older brother. On the other hand the intellectual development of a second-born boy was seen to be affected positively if there was considerable distance (4 - 6 years) between him and his older brother or sister. In general, children in small-well spaced families were expected to tend to be more intelligent and to achieve better in school than children from large families whether distantly or closely spaced. No prediction was made for differences in intelligence or achievement between children raised in small, closely-spaced families and children raised in small, distantly-spaced families. However it was expected that children from small closely spaced families would tend to be more socially accepted and competent than were children from small distantly spaced families.

It was expected that children from small distantly spaced families would tend to perceive their parents as more acceptant, more autonomy granting, and less psychologically controlling than would children from small closely spaced families.

We predicted that the space between children would be a more powerful factor in small families than it would be in large families. Large families with closely spaced children were expected to tend in general to produce offspring who are less intelligent and less intellectually developed than are the offspring from other family arrangements. However this prediction was not expected to hold for the first born children. These children from large, closely spaced families were predicted to be more conforming and psychologically insecure, especially in situations where they would have to function as individuals rather than as members of a group. On the other hand they were expected to be especially well able to adapt to situations where there was great interaction with equals, as in athletic teams or in bureaucratic organizations.

It was predicted that children in these large, closely spaced families would tend to perceive their parents as more psychologically controlling and as less acceptant than did children who came from other family constellations.

It was expected that children from large, well-spaced families would resemble more the well-spaced small family than the closely spaced large families. In a certain sense, a well-spaced large family is like having two or more small well-spaced families within the parent's lifetime.

CHAPTER III METHODOLOGY

Samples

This monograph reports on two studies, one conducted in the United States and the other conducted in Puerto Rico. The sample and the sampling procedures followed will be reported for the United States first and then for Puerto Rico.

The United States Sample

The sample for the United States study as originally designed was to consist of 500 complete families divided equally between large and small families. The study demanded intense participation from the mothers and one of the high school or junior high school male/female children. The mothers' interviews lasted from an hour to an hour and a half. The children's participation lasted for about three hours on a non-school day. Thus in order to participate in this study two family members had to commit themselves to it. The fathers' participation was requested at the end of the study and only required filling out a thirty minute mailed questionnaire.

Determining what would constitute a small and a large family required a lot of thinking. Conceptions of family size vary with the religious preference of the people. Rainwater (1965) found that for Protestants, a small family was defined as one with two children, a medium size family had three children, and four or more made up a large family. Among Catholics both two and three children were considered to be a small family, four made a medium size family and five or more made up a large family. A study by Westoff and Potvin (1967) using college women revealed that the majority of the women of Protestant, Jewish and no religious preference considered a five child family as a big family. Catholic women were about equally divided in thinking that five and six children constituted a big family. A majority of Mormon women tended to think that a big family was composed of six children but a substantial minority also conceived of big families as having five children. Regarding conceptions of small families, half of the Jewish women defined small families as consisting of one child while the other half defined them as including two children. The majority of Protestant, Catholic and Mormon women and those having no religious preference thought of the small family as being composed of two children. Taking into consideration the research reviewed and the fact that the sample to be used in the study would be small we decided to define the small families as those having two children and the big families as those having five of more children.

In summary in order to participate in this study a family had to have two or five or more children; one of the children had tobe attending junior high or senior high school; and both the mother and the teenage child had to agree to participate.

A. Sampling Procedure

As the study was proposed initially the sample was to be drawn from a particular school system where one of the investigators was working. However the proposed sample was too homogenous both in regard to ethnicity and socio-economic status. The investigators then tried to obtain permission from one of the school systems whose population is considered to be one of the most representative in the state. However because this town is characterized by these special properties the school officials reported that the town was saturated with studies and they were reluctant to take on a new and lengthy project for fear of adverse parental reaction to being over-studied. After this attempt several other systems with diverse populations were contacted but the school superintendents were afraid that the nature of the study being population, some of the Catholic families in their schools might react negatively to it.

Because of the difficulties described above of securing a sample through a school system, the investigators decided to try a different strategy. This strategy involved locating towns in which town censuses that contained information about families and the number and age of their children were available. The four towns finally chosen were among the few which had recent complete town censuses where all the residents of a household were listed including non-voting members. In general the towns that had conducted a full census were those with more affluent populations since poorer towns could not afford the expense of conducting a complete town census. The information contained on the complete town censuses consisted of the names of all the persons living in a dwelling unit, their dates of birth and the current occupation of all the adult members. Adult children who were members of the family but who did not live at home were not listed in the census. The school grades the children attended were not reported.

Once the strategy of using the complete town census for sampling was adopted negotiations to obtain information from different towns were started. In two towns the complete census was available for a small fee. In two other towns permission to use it had to be obtained in one town from the mayor and in the other from an administrative officer. Once the arrangements were finalized, research assistants were sent to different towns to copy the names of those families that fulfilled the requirements of the study. The assistants had to infer from the dates of birth, same last names, and sexes, the family composition of the household. The first towns contacted were Town I and Town II. After the lists of prospective families were prepared, a letter addressed to the fathers describing the nature of the study and requesting their participation was sent. The response to it was poor. It was later found through telephone conversations, that some fathers opened the letters but did not pass them on to the mothers.

After this experience sending the letter to the fathers, all the other letters describing the study and requesting participation were addressed to the mothers. A self-addressed post card was included for the family to accept or reject the offer. This card was also used by the families to inform the investigators that they did not fulfill the requirements of the study either because their children had already completed high school or because they had children that were not listed in the census. A sample of this letter and card are contained in Appendix A.

At about the same time as the mailings were going out, an article was published in the local newspapers containing a description of the study and a picture of the principal investigators with their family and some of the research assistants. A sample of a newspaper clipping for one of the towns is also contained in Appendix A. In the first two towns, if the family did not answer the first letter a second letter was mailed. When no answer was obtained for the second letter the research assistants started calling all the families with listed telephone numbers asking them whether they had received the letter, describing the study when necessary, and requesting their participation. Through the telephone call it was also possible to discern whether or not the family was truly eligible for the study since the census information did not list the children living away from home or the exact grade level of the children. In many instances families listed as having two children actually had one or two adult children living away. Of the two methods used in soliciting our sample, phoning after an introductory letter was the most effective.

When it was obvious that the first two towns would not provide enough families to fulfill the sample specified in the proposal, Town III was contacted. The same procedure of obtaining participation was followed in Town III except that no follow-up letter was sent since most of the families had listed telephone numbers, and we had learned from the previous experiences that telephoning was the most effective way of contacting people. Second mailings yielded very poor results in the first two towns. The fourth town was approached in order to complete the sample. Since the fourth town was actually a city, we decided to sample only those wards noted for having heavier concentrations of working class families and Jewish families. In the other towns the families that had participated tended to be middle and upper middle class Catholics and Protestants. For Town IV participation was requested through an introductory letter and a follow up telephone call. Because the study had to meet a deadline set by a Bureau of the Budget Authorization for the use of the instruments, there was no time to send a second letter to the families that had unlisted telephones or no telephones as was done in the first two towns.

B. Acceptance Rate

The acceptance rates by towns are presented in Table III-1.

Table III-1

Acceptance Rates of Families Contacted by Towns

Town	Total Families Contacted	Total Families Accepting	Per Cent Families Accepting
Town I	114	38	33%
Town II	362	78	21%
Town III	698	267	38%
Town IV	610	154	25%

Families from towns with homogeneous middle class populations such as Town I and Town III participated in greater numbers in the study than families from the other two towns which had more heterogeneous populations. In general, families who had an unlisted telephone number or who did not have a telephone were not as responsive as those we were able to contact by phone. Table III-2 presents the number of families contacted in each town with an unlisted number or without a phone.

Table III-2

Number of Families Contacted That Did Not Have a Telephone or With Unlisted Telephones

Towns	Total Families Contacted	Families With Unlisted or No Telephones	Per Cent Families Without or With Unlisted Telephones
Town I	114	27	24%
Town II	362	69	19%
Town III	698	44	6%
Town IV	610	110	19%

Another factor greatly influencing family participation was family size. In all the towns included in our sample, big families volunteered participation in far greater proportion to their numbers than small families. Because of this tendency we had to include two mailings to small families only in the last town sampled in order to complete our quota of small families.

Table III-3 presents the total number of small and large families that fulfilled our requirements in the different towns. The numbers enclosed in parentheses are those of the actual number of families of each size that participated.

Table III-3

Total Number of Large and Small Families That Fulfilled the Requirements of the Study

Town	Total Number of Large Families (5 children or more)	Total Number of Small Families (2 children)
Town I	44 (18)*	70 (20)*
Town II	139 (48)*	223 (30)*
Town III	314 (156)*	384 (111)*
**Town IV	114 (57)*	496 (97)*

* The number of families that actually participated in the study.

** For this town only the total families that were included in the first two mailings are presented since the last two mailings were restricted to small families in order to complete the requirements of the sample.

It seems that mothers of large families had more time available to participate and more children from whom a cooperative child could be recruited. Many of the women from small families who declined to participate gave as their explanation the fact that they were working and it was difficult for them to find time. In some families the mothers were willing to participate but their teenage children were reluctant. In other families the husbands did not allow their wives to participate. Families in which some members had psychological problems or who were having marital difficulties tended to decline to participate in the study. Families in which some members were suffering from sickness such as the flu or recovering from surgery felt too over-burdened to take part. Because the study required Sunday or Saturday participation by the teenagers, families who liked to go skiing on weekends did not participate as much as those with more local recreational activities.

C..Demographic Characteristics of the Towns Used in the Sample

The respondents in the study were all residents of four communities in Middlesex County, a predominantly suburban area extending west and northwest of metropolitan Boston. Since the location is a desirable one, it was expected that the survey sample would include families who had higher than average amounts of income and education. In order to place the results of the study in the proper perspective the 1970 Census composition of the four communities was examined. The following table shows the median number of years of education completed, the median income and the population size of the four communities from which the respondents in the study were drawn. The median years completed education and the median incomes for the entire United States population are also presented.

Table III-4

Median Income, Education and Size of Communities Included in the Study

Towns	Median Income *	Median Years * of Education		Population * Size
		Male	Female	
Town I	$17,361	14.9 (sexes combined) **		7,567
Town II	$14,271	13.0	12.8	13,513
Town III	$19,401	16.3	14.0	28,073
****Town IV	$14,909	13.1 (sexes combined) **		38,543
***United States (white)	$ 9,794	12.2	12.2	

* U.S. Bureau of the Census, Census of Population:1970, General Social and Economic Characteristics, Final Report PC (1)-(C23), Massachusetts, Washington, D.C., 1972.

** Data not available for each sex separately

*** U.S. Bureau of the Census, Statistical Abstracts of the United States: 1971, (92nd edition), Washington, D.C., 1971.

**** Only those Census tracts corresponding to the wards from which respondents were selected are included in the data.

It is evident from an examination of Table III-4 that the towns in which the participants in the study lived had residents with much higher median incomes and more years of education than citizens of the United States as a whole. Thus our families came from areas whose populations are better educated and have enjoyed more comfortable economic conditions than the average family in the United States.

The population of all the communities involved in the study was predominantly white containing only 1% Negro residents in contrast to the total United States population which contains 11%.

The four towns participating in the study were experiencing different rates of growth. Table III-5 presents the rates of growth for the different communities.

Table III-5

Rates of Population Growth in the Different
Towns Between 1960 and 1970

Towns	% Change from 1960 to 1970
Town I	34.8 *
Town II	23.2 *
Town III	7.6 *
Town IV	- 1.4 * (based on entire city)
SMSA Outside Central City	26.7 ***
United States	13.3 ***

* U.S. Bureau of the Census, Census of Population: 1970, General Social and Economic Characteristics, Final Report PC (1)-C23, Massachusetts. Washington, D.C., 1972.

*** U.S. Bureau of the Census, Statistical Abstracts of the United States: 1971. (92nd eduction) Washington, D.C., 1971.

Table III-5 reveals that Towns I and II are growing towns while III and IV are showing stability. Towns I and II are farther away from the central city and still have room for some development. The other two towns are established suburbs with less room for growth. When compared with national rate of growth figures for areas within an SMSA but outside the central city, one of the developing towns is experiencing about average growth while the other one is above the average. It was considered important to determine the extent to which the women in the towns included in our survey participated in the labor force. Table III-6 presents data for women participating in the labor force in the four towns.

Table III-6

Per Cent Married Women With Husbands Present Participating in the Labor Force

Town	% Women Participating
Town I	Data not available
Town II	33.2 *
Town III	29.9 *
Town IV	38.0 * (Data based on entire city)
United States	40.8 **

* U.S. Bureau of the Census, Census of Population: 1970, General Social And Economic Characteristics, Final Report PC (1)-C23, Massachusetts. Washington, D.C., 1972.

** U.S. Bureau of the Census, Statistical Abstracts of the United States: 1971 (92nd edition) Washington, D.C., 1971.

The data presented above show that Towns II and IV approximate the national average of working women while Town III appears to be a more traditional town where more women choose to stay home rather than participate in the labor force.

D. Final Study Sample

The final sample of the study consisted of 537 families. Of these families 279 were large and 258 were small. The breakdown of participating families by family size and town is presented in Table III-7.

Table III-7

Number of Large and Small Families that Participated in the Study from the Different Towns

Town	Total Families Participating	% Families Each Town Contributed to Total Sample	Number of Large Families	Number of Small Families
Town I	38	7%	18	20
Town II	78	13%	48	30
Town III	267	50%	156	111
Town IV	154	29%	57	97

Fifty per cent of the families participating in the study came from Town III and approximately 29% from Town IV. Thus half the sample came from the town with the highest acceptance rate of 38%.

A comparison of the median years of education of the participants in the study with that of other citizens in their towns is reported in Table III-8.

Table III-8

Median Years of Completed Education of the Participants in the Study Compared With National Figures for Other Residents of the Towns

Town	Men	Women
Town I	18.0 (14.9)	15.4 (4.9)
Town II	15.5 (13.0)	14.0 (12.8)
Town III	16.0 (16.3)	14.0 (14.0)
Town IV	15.5 (14.0)	13.2 (12.8) * (based on entire city)

* Education statistics for this town were not separated by sexes. All national statistics appearing within parentheses were taken from U.S. Bureau of the Census of Population: 1970, General Social and Economic Characteristics, Final Report PC (1)-C23, Massachusetts. Washington, D.C., 1972.

An inspection of Table III-8 shows that all the participants except those from Town III had slightly higher median years of completed education than the median years of education reported for the total group of citizens of the respective towns. However because the method of coding completed years of education was different in the Census and in the present study the comparisons between the two sets of data are not completely valid.

The total income figures for the families involved in the study are presented in Table III-9.

Table III-5

Total Family Median Incomes for Study Participants and Median Incomes for the Total Communities

Town	Median Incomes for Study Participants	Median Incomes for Whole Town *
Town I	$29,550	$17,361
Town II	$20,950	$14,271
Town III	$26,200	$19,401
Town IV	$19,350	$14,909 **
United States	$19,351	$ 9,794 ***

* U.S. Bureau of the Census of Population: 1970, General, Social and Economic Characteristics, Final Report PC (1)-C23, Massachusetts. Washington, D.C., 1972.

** Only those census tracts corresponding to the wards from which respondents were selected are included in the data.

*** U.S. Bureau of the Census, Statistical Abstracts of the United States: 1971, (92nd edition), Washington, D.C., 1971.

The median incomes of the families participating in the study were substantially higher than those of the towns in which they lived. The families of Town IV were closest to the town median while the families of Town I were the furthest away from their town median.

In summary, the participants in the survey were higher on socio-economic status as measured by income and education than either residents of their respective towns or residents of the United States as a whole. Thus on basis of the socio-economic data the findings obtained from this study would be most appropriately generalized to a white upper middle class suburban populations.

The ages of the participants are presented in the following table.

Table III-10

Age of Participants in the Study

	Mean	Median	S.D.	95% Confidence Interval
Women	43.2	43.1	5.3	32.6 to 53.8
Men	46.0	45.9	5.6	34.7 to 57.3

The percentage of women in the study who worked some time during the year prior to being interviewed is presented in Table III-11.

Table III-11

Percentage of Women in the Study Who Worked During Year Prior to Interview Compared with Town and United States Percentages

Towns	Regular Part-time	Occasional Part-time	Regular Full-time	Occasional Full-time	Total Women Who Worked in Study	Total Women Working in Entire Town
Town I	10.5	2.6	26.3	2.6	42.0	data not available
Town II	25.6	7.7	15.4	2.6	51.3	39.2 *
Town III	19.1	7.1	12.0	2.2	40.4	29.9 *
Town IV	30.7	10.5	20.9	.7	62.8	38.0 *
United States					40.8 **	

* U.S. Bureau of the Census, Census of Population: 1970, General, Social and Economic Characteristics, Final Report PC (1)-C 23, Massachusetts.

** U.S. Bureau of the Census, Statistical Abstracts of the United States: 1971 (92nd edition) Washington, D.C., 1971. This data is for the entire city.

The data presented in Table III-11 is not strictly comparable since the census data on work is compiled on the basis of work during the week prior to a given date and our data was obtained in reference to any time during the year prior to the interview date. The census data is bound to under-estimate employment for women who hold sporadic full time or part time jobs. However, if one considers the two categories of our study most likely to have been included in the census survey, i.e. regular part time and full time work, the women in the study from Town II and III appear to work at about the same rate as other women in their towns while the women participating in the study from Town IV tended to work more than other women in the town. However, when considering the results for Town IV, it should be taken into account that the women participating in the study from this town were by design more heavily representative of the two child family women than those from other towns and women with two children families are more likely to participate in the labor force.

The Puerto Rican Sample

In the Puerto Rican study the children were the main source of information for the entire family. The sample included roughly 5400 senior and junior high school students attending school in the Bayamon Norte school district in Puerto Rico. This data was collected in the Spring of 1968 and included all the public schools and three private schools in the district. The data was originally collected for a comprehensive study of non-intellectual factors that affect academic achievement. Because there was great concern with peer groups and with the interaction between teachers and students, it was decided to study a complete school district rather than obtain an island wide sample. Furthermore, considerations of time and cost indicated one school district rather than several scattered across the island. Other variables taken into account in the selection of the district were its nearness to Hato Rey where our offices were and the existence of at least some rural portions as well as representation of urban Puerto Rico. One of the strongest factors for selecting Bayamon Norte over other similar districts was the known interest and cooperation of the superintendent Mrs. Asuncion Lorenzana de Rondon.

All the students were encouraged to participate and about 80% of the students were reached with an average instrument. The students who did not take a given questionnaire were usually absent that day or, in some cases, had transferred or dropped out of school before the week of administration. The study involved about nine hours of filling out questionnaires which were usually distributed in two or three sessions on separate days.

A. Obtaining a Sample of Families

Because the data was not gathered originally for a study about families but about individual children, it had to be converted to a form where the families were the unit of analysis. The problem was that families with two or more children might have more than one child present in the study since the sample of students included almost all children of junior and senior high school age attending school in the district. In order to deal with this situation, a procedure was devised to eliminate redundant reporting on the same family unit by siblings.

This procedure used the fact that Puerto Rican children use both the maternal and paternal surnames. Since the computer tape records included the full names of each child in the sample, these names were sorted alphabetically using the OSIRIS sorting procedure. This sorting involved all 5368 records of students for whom some data was available. The paternal surname was sorted first, followed by the maternal surname. Thus, students who reported the same maternal and paternal names, even if they were in different grades or in different schools, would be grouped together. We then printed out lists which included the child's name, his maternal and paternal name, his identification number and his answers to certain key questions such as the number of siblings he had and his religion.

There were about 780 records for which data on these variables was missing. These records, which in general were also missing considerable other information, were dropped from the analysis. In particular, without information on the size of the family of origin, they were useless for our study.

Based on the distribution of children according to family size in the total sample and an estimate of the number of children from a given family size likely to be in grades six through twelve, an estimate was derived of how many duplicate family of origin records to expect. The result of these calculations was the conclusion that about 37 per cent of the records were expected to be reporting on the same families of origin. Several procedures for eliminating duplicate recordings were experimented with until one was found which eliminated approximately this percentage of the records.

The final procedure selected consisted of examining closely all sets of records with exactly the same maternal and paternal names. However, since there are relatively few Spanish surnames, many unrelated children had identical maternal and paternal surnames. For example, Rodriquez Rodriquez was quite common. When such common surnames were found the number of children in the family was examined as reported by each child. If these numbers were the same, or only one off, and the religion was identical, we then assumed that the students belonged to the same family. Whenever such sibling groups were found, we deleted from our records the younger siblings on the basis that the older child would provide more accurate information.

This procedure yielded 3595 assumed families of origin, each as reported by one student. The number and percent distribution of these assumed families of origin are presented in Table III-12.

Table III-12

Number and Percent of Assumed Families of Origin (N=3595)

No. of Children	1	2	3	4	5	6	7	8	9	10+
Frequency	131	492	638	552	456	353	259	189	154	371
Percent	3.6	13.7	17.7	15.4	12.7	9.8	7.2	5.3	4.3	10.3

The family sizes reported by the students before eliminating duplicate reporting are shown in Table III-13.

Table III-13

Number of Children in the Student's Family of Origin (n=5368)

No. of Children	1	2	3	4	5	6	7	8	9	10+
Frequency	170	700	1026	839	664	528	385	270	232	554
Percent	3.2	13.0	19.1	15.6	12.4	9.7	7.2	5.0	4.3	10.4

Comparing Tables III-12 and III-13 reveals that the proportion of families in each bracket did not change significantly after duplicate reporting was eliminated.

B. Demographic Characteristics of Bayamon

The respondents in the Puerto Rican sample were all residents of ten census tracts in the city of Bayamon, an area that is about 15 miles to the southwest of San Juan. The 1970 composition of the census tracts in Bayamon, in which the participants of the study lived, were analyzed. The following table shows the median number of years of education completed, the median income, and the population size of the area from which the respondents in the study were drawn. The median years completed education and the median incomes for the entire San Juan SMSA are also presented.

Table III-14

Median Incomes, Education, and Size of Community
According to Census Data for the Area Included in the Study*

Area	Median Income	Median Years of Education	Population Size
Bayamon **	$4,459	9.4	71,613
San Juan SMSA	$4,595	9.7	851,247
Puerto Rico	$3,919	4.6	2,754,000

* U.S. Bureau of the Census, Census of Population and Housing: 1970, Census Tracts, Final Report PHC (1)-241 San Juan, Puerto Rico, SMSA

** Only those census tracts corresponding to areas from which respondents were selected are included in the data.

It appears from an examination of Table III-14 that residents of the area in which the participants of the study lived had a median income and median years completed education just slightly lower than that of the San Juan SMSA. Thus, the Puerto Rican families in this study seem to be representative of families in the San Juan area.

The area of Bayamon which was sampled was experiencing a great deal of growth. Table III-15 presents the rates of growth for Bayamon and for the San Juan SMSA.

Table III-15

Rates of Population Growth Between 1960 and 1970 *

Area	% change from 1960 to 1970
Bayamon	344.6
San Juan SMSA	31.4
Puerto Rico	15.4

* U.S. Bureau of the Census: Number of Inhabitants: Puerto Rico: 1970.

Table III-15 shows that the area of Bayamon is growing at a phenomenal rate compared to the San Juan SMSA and also to all of Puerto Rico.

The percentage of women who are employed is presented in Table III-16 for Bayamon and for San Juan SMSA. The data is based on all women over 16 years who work.

Table III-16

Women in the Labor Force *

Area	% women participating in the labor force
Bayamon	27.6
San Juan SMSA	29.5
Puerto Rico **	26.6

* U.S. Bureau of the Census, Census of Population and Housing: 1970, Census Tracts, Final Report PHC (1)-241, San Juan, Puerto Rico, SMSA.

** U.S. Bureau of the Census Statistical Abstracts of the United States, 1971 (92nd edition), Washington, D.C.

The data presented above indicate that Bayamon women are represented in the labor force in about the same proportion as Puerto Rican women island wide. However, they are slightly less employed than the women in the San Juan SMSA.

The median family income for Bayamon (1960) was $2,347. This was second only to the municipio of San Juan-Rio Piedras and well above the island-wide median of $1,268. Bayamon stood third among the municipios in population density. In Bayamon some 38 percent of the working population was employed in some other municipio in 1960. The island-wide average was 16 percent and among all the Municipios, Bayamon stood seventh on this measure of the "bedroomness" of the community. For Bayamon in 1960, the median grade of school completed for males 25 or older was 6.9 grades. On this criterion Bayamon again stood second only to San Juan and well above the island-wide median of 4.6 grades. Bayamon was third in its percent literate males (87.7%) and third in its percent working males employed in professional or technical capacities. It stood second to San Juan in its percentage of males who spoke English (45.2%). Only 10 percent of the rural employed persons of Bayamon were in agriculture. For all of Puerto Rico some 46% of the rural employees were in agriculture.

In brief then, Bayamon is among the most urban, fastest growing, wealthy, and best educated municipios in Puerto Rico. At the same time the district maintains a great variation among its population. As the whole of Puerto Rico is becoming more urban, better educated, and increasing in family income, Bayamon now is like what much of urban Puerto Rico is tending to become. The results founded on data from Bayamon will tend to be generalizable to much of urban Puerto Rico in the future.

INSTRUMENTS

This section will discuss the data gathering instruments used in both studies. In the United States study instruments were administered to the mothers, fathers, and junior or senior high school children. In the Puerto Rican study an extensive battery of instruments was administered to the children. Thus the information about the parents was provided mainly by the children. In the next pages we will describe the instruments used in the United States sample first and then follow with a discussion of the instruments used in the Puerto Rican sample.

Instruments Used in the United States Sample

A. Mothers' Instruments

Information from the mothers was obtained through an extensive interview schedule. Questions for the interview schedule were created specially for this investigation or borrowed from the following authors: Stycos (1955), Rainwater (1965), Gurin, Veroff & Feld (1960), Blood & Wolfe (1960), Cantril (1965), Converse & Robinson (in press), Fried (1971), Freedman & Takeshita (1969), Easterlin (1973) and others. The Self-esteem Scale designed by Rosenberg (1965) and another scale entitled Multi-dimensional Internal-External Control Scale adapted by Strumpel (1971) from a scale by Gurin, Gurin, Lao & Beattie (1969) complete the set of instruments administered to the mothers. A description of these instruments with samples of those which are not copyrighted appears in Appendix B.

The interview schedule was administered to the mothers in their own homes at their own convenience. The interviewers usually called the mothers a week or two weeks ahead of time to determine the most appropriate time. All the interviewers but one had at least a bachelors degree and some had a masters degree. Prior to going into the field, the principal investigators explained the project to the interviewers and discussed one by one all the questions in the interview schedule. In many cases the interviewers had to interview one of the principal investigators before going out into the field. Only two complaints were received about the interviewers out of a total of 537 families interviewed. In general the interviews lasted from an hour to an hour and a half.

Most of the women enjoyed being interviewed and commented at the end of the session that the questions made them review their family life history. Almost all the women were extremely polite and pleasant with the interviewers offering them coffee or other refreshments. Some women baked specially for the interviewers. The interviewers were instructed to answer all the questions posed by the mothers and if they were not able to do so to suggest to the mother that she call the principal investigators. The interviewers always started the session with the main interview and left the two scales that the mother had to fill out for the end. The last thing the interviewer obtained was the mother's permission to copy the grades and achievement scores of the children participating in the study. Before leaving the home the interviewer would tell the mother that the staff of the study would be in contact with her children about their participation in the following weeks.

B. Fathers' Instruments

The fathers' participation in the study consisted of filling out a mailed questionnaire that took about thirty minutes to complete. The short questionnaire consisted of those questions from the mothers' interview schedule that were judged to be most important and where the fathers' point of view was needed most. The complete fathers' questionnaire appears in Appendix C.

C. Children's Instruments

The children's instruments consisted of the following: a background questionnaire, the Children's Test Anxiety Scale (Sarason, Davidson, Lighthall, Waite & Rumbush, 1960), the Dogmatism Scale (Rokeach, 1956; Kerlinger & Rokeach, 1966), the Authoritarianism Scale (Adorno, Frenkel-Brunswik, Levinson & Sanford, 1950), the High School Personality Questionnaire (Cattell & Cattell, 1969), Children's Report of Parental Behavior Questionnaire (Schaefer, 1965) the mother's and father's form, the Children's Social Desirability Questionnaire (Crandall, Crandall & Katkovsky, 1965), the Test of Effective Academic Motivation (Smith, 1974) and the Intellectual Achievement Responsibility Questionnaire (Crandall, Katkovsky & Crandall, 1965). Descriptions of all the instruments and samples of those which are not copyrighted appear in Appendix D.

The children's instruments were administered on Saturday and Sunday afternoons from 1 PM to 5 PM. The sessions were held in churches of different denominations, a parochial school and a building on a college campus. The teenage children of each town had several opportunities to attend. The average time of completion for the teenage children questionnaires was three hours with some fast students finishing in two and a half hours and some slower students finishing in four hours. Students were told that the investigators would stay with them as late as 5:30 PM. Refreshments were provided. The principal investigator or the project director were always present for the sessions except two where a small number of students was expected. The questionnaires were given to the students in the same order each time. However, some students chose to do the short questionnaires first. The questionnaires covering the children's attitudes toward their parents were placed early in the session to insure valid and reliable information. The specific order of presentation of the instruments was as follows: General Background Questionnaire, *Children's Report of Parental Behavior* (father's form), *Intellectual Achievement Responsibility Questionnaire*, *Children's Report of Parental Behavior* (mother's form), *Personal Philosophy* (F & D scales), *High School Personality Questionnaire*, *Children's Social Desirability Scale*, *Test Anxiety Scale*, and *Test of Effective Academic Motivation*.

Some students who were not able to finish because they came late to the session or had to leave early because of prior commitments were allowed to take the unfinished questionnaires home and were given a self-addressed stamped envelope to use in mailing them back. A minority of students who attended boarding school were allowed to finish the whole battery of questionnaires at home. In families where more than one child wanted to participate all the children willing were allowed to do so. Thus for a considerable number of families we have more than one child participating.

After all the questionnaire sessions were held, the project director and a research assistant, after obtaining the appropriate permission from the superintendents and school committees of the different towns, visited the different public schools and obtained the grades and achievement scores that were available for the children of the study. The achievement tests available were usually the *Iowa Tests of Basic Skills*, the *SRA Achievement Test Series*, the *Stanford Achievement Tests*, and *STEP series*. For some senior and junior high school children the SATS and PSATS were also available. For the children not attending public schools a letter was written to the private schools accompanied by a copy of the parents' permission slip soliciting a xerox copy of the records. Most of the private schools complied with the requests.

Instruments Used in the Puerto Rican Sample

The Puerto Rican study obtained all its data from the children of the families. The children were administered all the instruments given to the children of the United States sample plus others. However, this report will discuss only data available for both samples. The instruments used in the Puerto Rican study were translated into Spanish and adapted to Puerto Rican culture by Dr. Ena V. Nuttall, Mrs. Blanca Ruiz de Rodriquez and others. These instruments were administered in three sessions of about two hours each occurring on a different day. Although the students were informed that their participation was voluntary almost all the children present in the school at the time of testing filled out the questionnaires. The students who were absent, had withdrawn or transferred did not complete the questionnaires. The administration was supervised by senior research assistants who were native Puerto Ricans or Cubans.

DATA MANIPULATION AND STATISTICAL PROCEDURES

Both the suburban Boston and the Bayamon data were built into SPSS files (Nie, Bent, & Hull, 1970). The bulk of the data analysis was conducted using this statistical analysis system. The Bayamon data on OSIRIS files and some of the analyses reported with that data were conducted using that system.

For the multivariate analyses of variances reported, the MULTIVARIANCE system (Finn, 1972) was used. For the multivariate analyses of variances cases with missing data were deleted from the analyses unless it was possible to find reasonable values to insert.

In general the mother's interview was taken as the basic data source. Thus in determining a family's religion (unless otherwise noted) the religion of the mother was used. Similarly information about family visiting patterns and even many aspects of husband's use of leisure time were obtained from the mother's interview. Generally this is noted in the text.

CHAPTER IV FAMILY SIZE AND PARENTS

This chapter presents data relating to the question of how families with many or few children differ. The main focus is on the suburban Boston sample since parents were not interviewed or questionnaired in Puerto Rico. In some areas the data from the teenagers in Puerto Rico provided enough information to allow a discussion of family differences by family size.

A. Religion and Socio-economic Status- Suburban Boston Sample

Is family size an incentive or a constraint on the career achievements of families? Hill (1970) in his study of family development in three generations investigated this hypothesis. His measures of career achievement included; income level, durable goods acquisition, residence size and occupational level. He found that in the grandparent generation there was a positive relationship between high achievement scores and large family size. Hill attributed this relationship to the greater agrarian nature of the society to which the grandparents belonged where the children could actually help the parents increase the family income and construct bigger residences. However in the two younger generations the high achievers had the smallest number of children while the low achievers had the largest families. Thus it seems that in the present urban society the greater the number of children a family has the more difficult it will be for them to achieve social and economic success.

Hypotheses - In this area we hypothesized that there would be a major effect for both socio-economic status and religion and an interaction between these two variables. In general we expected that the parents of the smaller familes would be more likely to be Protestant or Jewish than Catholic. We predicted that there would be an interaction between social status and religion, with the highest and lowest socio-economic classes who are Catholic having a higher fertility ratio than the middle socio-economic groups. We believed that this effect would be related to the degree of religiosity, in that we expected that Catholics who reported greater involvement and interest in their faith would have the largest families regardless of the social class to which they belong. This relationship between fertility and religiosity was not expected to hold for Protestant and Jewish families.

The socio-economic effect we expected was that the fathers of the smaller families would have higher socio-economic status as indicated by their occupational level, educational level, financial status, and their ownership and value of their homes.

Religion - The family size by religion effect was very highly significant. Catholics were far more likely to have large families than were families of other religions. In the suburban Boston sample there were 258 small families (where small was defined as having exactly two children) whose religion was known. Of these only 25 percent were Catholic. On the other hand of the 279 large families (five or more children) in the sample whose religion was known, some 69 percent were Catholic. Thus the proportion of Catholics among the large families was more than two and a half times the proportion of Catholics among the small families.

We can conclude that Catholics were more likely to have large families than were families of other religions.

Occupational Status - The occupational status of the fathers was measured with a modified Warner scale (Inkeles & Smith, 1974) with the highest occupations coded "1" and the lowest coded "7". In this sample there were few families in the lower occupations and the occupations rated 5, 6, or 7 were combined into one category. The highest occupations, rated "1" include high private or government officials, university presidents or distinguished professors, successful surgeons or other medical specialists, and such. Ratings of "5" include foremen, small merchants, office workers, primary school teachers, electricians, plumbers and other craftsmen.

Since we were expecting an interaction between religion and occupational status related to family size, the data were examined separately for Catholic and for other religions. The data is presented in Table IV-1. In these tables the columns are percents and sum to 100 percent except for rounding error. Separate Chi Square analyses were done for the Catholics and for the Non-Catholics. Because of small numbers, it was not possible to break the Non-Catholics down into further categories of Protestants, Jewish, and Other or No religion.

Table IV-1

Father's Occupational Status by Family Size Controlled on Religion

Father's Occupational Status		Religion: Catholic		Religion: Non-Catholic	
		Small Family (N=46)	Large Family (N=135)	Small Family (149)	Large Family (N=68)
Highest	1	6.5%	15.6	8.7	39.7
	2	34.8	35.6	53.7	39.7
	3	32.6	24.4	22.8	13.2
	4	17.4	12.6	8.1	2.9
Lowest	5 to 7	8.7	11.9	6.7	4.4
		Chi Square (4df) = 3.86		Chi Square (4df) = 30.63	
		Prob. Not Significant		Prob. less than .001	

These results indicate that for the Catholics there was no significant relationship between family size and father's occupational status while for the men who were not Catholic there was a very powerful relationship. However this relationship was the opposite of what had been predicted. There was a marked tendency for Non-Catholic men who had large families to be of higher occupational status than those who had small families. While about nine percent of the two-child Non-Catholic fathers had the highest occupations, about forty percent of the large-family Non-Catholic fathers had these highest occupations. While about equal numbers of small family Non-Catholic fathers came from the highest and lowest rated occupations (8.7 vs. 6.7 percent), about nine times as many large family Non-Catholic fathers had the highest occupations as had the lowest (39.7 vs. 4.4 percent).

Among the Catholics there is some tendency for the hypothesized interaction to occur. Comparing the very highest occupations ("1's") with those in the middle status range (2, 3 and 4) and the very lowest occupations for this sample (5, 6, and 7) we obtain the following table.

Table IV-2

Test of Catholic-SES Interaction with Family Size

Grouped Occupational Status		Catholic Families Small (N = 46)	 Large (N = 135)
Highest	1	6.5%	15.6%
Upper Middle	2 to 4	84.8	72.6
Lower	5 to 7	8.7	11.9

Chi Square (2df) = 3.09

Prob. Not Significant

Table IV-2 indicates that the hypothesized interaction between fertility and socio-economic status was not present for the Catholics. Summarizing the relationship with socio-economic status as indicated by occupational status, there was no significant relationship for the Catholic families between occupational status and fertility. However there was a powerful and unpredicted significant tendency for higher status Non-Catholic men to have large families. These findings were then tested with other measures of occupational status.

Educational Level Attained - Analysis of the education attained by the fathers (see Table IV-3) revealed a significant relationship between family size and education for the Non-Catholic fathers but not for the Catholic fathers.

Table IV-3

Father's Educational Attainments by Family Size Controlled on Religion

Father's Educational Attainments	Religion			
	Catholic		Non-Catholic	
	Small Family (N=65)	Large Family (N=194)	Small Family (N=193)	Large Family (N=85)
Law or MD Degree	6.2%	11.9%	6.2%	22.4%
Ph.D. Degree	6.2	3.1	14.0	12.9
M.A. Degree	10.8	17.0	26.4	17.6
Graduate Educ. but no Degree	4.6	5.7	6.7	8.2
Bachelor's Degree	33.8	30.4	24.4	27.1
Some College	13.8	16.0	13.5	5.9
High School or less	24.6	16.0	8.8	5.9
	Chi Square (6df) = 6.36 Not Significant		Chi Square (6df) = 19.78 Probability less than .01	

Table IV-3 indicates that the education attained by the small family, Non-Catholic fathers was significantly less than that attained by the large family Non-Catholic fathers. The median education of the small family Non-Catholic fathers was some education beyond college but no graduate degrees, while the large family fathers in this religious category had a median education of a master's degree.

The Non-Catholic fathers of large families were three times as likely to have been educated as physicians or as lawyers than were the small family fathers who were not Catholic (22.4 percent to 6.2 percent). Among the Catholics this tendency for physicians and lawyers to be more prevalent among the fathers of large families also existed but the ratio was only two to one (11.9 vs. 6.2 percent) and the entire educational distribution did not differ significantly between Catholic fathers of large and of small families.

Among college graduates, family size did not affect the proportion of men going on to higher education. In fact, among Catholic men the proportion of college graduates who went on to higher education was larger among large family fathers than among small family fathers. However a large family strongly decreased the probability of a woman college graduate attaining more education. Among the Non-Catholic women the large family women were less than a third as likely to go on beyond college given that they had graduated from college than were the Non-Catholic small family women. Among the Catholic women there was almost twice the likelihood of a small family college graduate going on as for a large family college graduate.

The conclusion can be reached that for women, but not for men, having a large family was an alternative to attaining more education. This effect was strongest for the Non-Catholic women, where family size was more often a planned choice.

Home Ownership, Size, and Value - Small families were significantly more likely to be home renters than were the large families, but these differences were small. Some 8.2 percent of the small families rented while only 2.2 percent of the large families were renters. A Test of Independent Proportions gives the significance level of this six percent difference as beyond the .001 level. These proportions were too small to be tested separately by religion.

The sizes of the homes for large and small families were examined and the data are presented in Table IV-4. As was expected, the larger families tended to have the larger homes. The results were significant for both religious groups although the effect was stronger for Non-Catholics.

Table IV-4

Number of Rooms in Home by Family Size, Controlled on Religion

Number of Rooms in Home	Religion			
	Catholic		Non-Catholic	
	Small Family (N=65)	Large Family (N=194)	Small Family (N=193)	Large Family (N=85)
Thirteen or more	4.6%	26.8%	12.4%	43.5%
Ten to twelve rooms	27.7	37.6	37.8	34.1
Seven to nine rooms	49.2	32.0	42.0	20.0
Six or fewer rooms	18.5	3.6	7.8	2.4
	Chi Square (3df) = 31.30 Prob. less than .001		Chi Square (3df) = 37.14 Prob. less than .001	

The large families were more than three times as likely to have houses with thirteen or more rooms as were the two-child families. While significant, the differences in house sizes should not be overestimated. For small families of both religions the median house had ten rooms, while for the large families the median house had eleven rooms. Thus while the large families tended to have larger homes, they were not that much larger.

The mean number of rooms per person for the large families was 1.67 while for the small families it was 2.42. The large families then, while tending to have larger homes, did not have homes large enough to make up for the increase in the number of people in the family. While the larger families had larger homes, they were also more crowded than were the two-child families.

The relationship between family size and house size was little affected by religion although the Catholics, for a given family size, tended to have somewhat smaller houses than did the Non-Catholics.

The number of bathrooms was also examined as a measure of the facilities available to families. These data are presented in Table IV-5.

Table IV-5

Number of Bathrooms by Family Size Controlled on Religion

Number of Bathrooms	Religion			
	Catholic		Non-Catholic	
	Small Family (N=65)	Large Family (N=194)	Small Family (N=193)	Large Family (N=85)
Five or more	0.0%	7.2%	0.5%	11.8%
Four bathrooms	1.5	11.3	8.8	25.9
Three bathrooms	27.7	29.9	30.1	37.6
Two bathrooms	46.2	41.2	44.0	22.4
One bathroom	24.6	10.3	16.6	2.4
	Chi Square (4df) = 17.48 prob. less than .01		Chi Square (4df) = 49.36 prob. less than .001	

In keeping with the findings on house size, the large families were more likely to have homes with several bathrooms. The effect was stronger for the Non-Catholics than for the Catholics, but existed in both religious groups. Large families were twice as likely as small families to have four bathrooms and twenty times as likely to have five or more bathrooms. However the median number of bathrooms was two for both large and small Catholic families and was three for large Non-Catholic families and two for small Non-Catholic families.

In the interviews the wives were asked their estimate of the present value of their home. The results are presented in Table IV-6. Among the Non-Catholics there was a significant (p less than .01) relationship between family size and value of the home, while for the Catholics the relationship was not present.

Table IV-6

Estimated Present Value of Home by Family Size, Controlled on Religion

Estimated Value of Home	Religion: Catholic Small Family (N=65)	Catholic Large Family (N=194)	Non-Catholic Small Family (N=193)	Non-Catholic Large Family (N=85)
$70,000 or more	23.1%	24.7%	28.0%	41.2%
$50,000 to $69,000	23.1	23.7	25.4	32.9
$40,000 to $49,000	24.6	22.7	24.4	11.8
$30,000 to $39,000	18.5	22.7	17.6	8.2
Less than $30,000	10.8	6.2	4.7	5.9
	Chi Square (4df) = 1.93 Not Significant		Chi Square (4df) = 12.68 prob. less than .01	

Among the Non-Catholics, 41.2 percent of the large families had homes worth more than $70,000 while only 28 percent of the small families did. For the Catholics there was little difference, with 23.1 percent of the small families and 24.7 percent of the large families having homes worth this much.

The conclusions of this section are that the large families tended to have larger homes with more bathrooms, regardless of religion. These differences were not very large in terms of the median number of rooms or bathrooms. However the large families were more crowded in their homes than were the small families. These home size tendencies were somewhat stronger for the Non-Catholics than for the Catholics. In terms of home value, large Non-Catholic families tended to have more valuable homes than did the small Non-Catholic families while there was no difference in home values between large and small Catholic families.

Financial Status

The mothers were asked to estimate the total family income for the preceding year. This family income was to include the contributions of anyone in the family who worked. The results by family size are presented in Table IV-7. As with socioeconomic status and house value, the results were significant only for the Non-Catholics. The median family income for large family Non-Catholics was between $30,000 and $35,000 while the median family income for small family Non-Catholics and all Catholics in the study was between $20,000 and $25,000. Thus, on the average, the Non-Catholics who had five or more children were about $10,000 or more richer in yearly income than were the other three groups. Some 44.7 percent of the Non-Catholic large families had incomes above $35,000 while only 20.2 percent of the small family Non-Catholics had incomes this high.

Table IV-7

Total Family Income by Family Size Controlled on Religion

Family Income Last Year	Religion			
	Catholic		Non-Catholic	
	Small Family (N=65)	Large Family (N=194)	Small Family (N=193)	Large Family (N=85)
$35,000 or more	6.2%	21.1%	20.2%	44.7%
$30,000 to $34,999	13.8	7.2	8.8	9.4
$25,000 to $29,999	9.2	12.9	15.5	14.1
$20,000 to $24,999	24.6	18.6	24.9	10.6
$16,000 to $19,999	18.5	18.6	16.6	8.2
$13,000 to $15,999	16.9	12.9	7.3	8.2
$10,000 to $12,999	7.7	4.6	5.7	2.4
Less than $10,000	3.1	4.1	1.0	2.4

Chi Square (7df) = 11.68 Not Significant

Chi Square (7df) = 23.89 P less than .01

Subjective Financial Status

The mothers were asked to describe their family's financial condition using the six subjective categories "Barely able to make a living", "Having the necessities", "Comfortable", "Well-to-do", "Wealthy", and "Extremely wealthy". Very few used the extreme categories; only seven said "Barely able to make a living" (five large families, two small) and only ten said "Wealthy" or "Extremely Wealthy" (seven large and three small families). These six categories of subjective financial status were collapsed to three and the data are presented in Table IV-8.

Table IV-8

Subjective Financial Status by Family Size Controlled on Religion

Subjective Family Status	Religion			
	Catholic		Non-Catholic	
	Small Family (N=65)	Large Family (N=192)	Small Family (N=193)	Large Family (N=85)
Well-to-do or better	6.2%	9.4%	15.5%	34.1%
Comfortable	70.8	68.6	72.0	57.6
Having the necessities or worse	23.1	21.9	12.4	8.2
	Chi Square (2df) = 0.65 Not Significant		Chi Square (2df) = 13.11 Probability less than .001	

There was no difference in the subjective financial status by family size among the Catholics, but there was a striking difference among the Non-Catholics. Non-Catholic mothers of large families were twice as likely to say that their families were "Well-to do" as were mothers of small non-Catholic families.

Some 34.1 percent of the large family mothers but only 15.5 percent of the small family mothers among the Non-Catholics saw themselves as well-to-do. At the other end of the scale, 12.4 percent of the small family mothers but only 8.2 percent of the large family mothers among the Non-Catholics saw their families as only having the necessities. Thus the subjective financial status was somewhat more related to family size among the Non-Catholics than was actual income.

Ownership of Automobiles

The by now familiar pattern of relationships was also found for automobile ownership. As indicated in Table IV-9 there was a significant relationship between family size and automobile ownership for the Non-Catholic families but not for the Catholic families. Among the Non-Catholics, while 7.1 percent of the large families had four or more cars, only one percent of the small families had this many. Similarly, in this group twice as many large families had three cars as did the small families. On the other hand, the median number of cars for both large and small families of both religious groups was two cars.

Table IV-9

Automobile Ownership by Family Size Controlled on Religion

Number of Automobiles Owned	Religion			
	Catholic		Non-Catholic	
	Small Family (N=65)	Large Family (N=194)	Small Family (N=193)	Large Family (N=85)
Four or More Cars	6.2%	6.7%	1.0%	7.1%
Three Cars	7.7	13.9	11.4	22.4
Two Cars	64.6	59.3	63.2	58.8
One or No Cars	21.5	20.1	24.4	11.8
	Chi Square (3df) = 1.83		Chi Square (3df) = 16.98	
	Not Significant		Probability less than .001	

B. Religion and Socio-economic Status - Bayamon Puerto Rico Sample

This chapter examines the relationship between family size, socio-economic status, and religion in the Puerto Rican sample. The Puerto Rican sample included families of all sizes in contrast to the American sample which excluded families with one, three, and four children. The variables used to measure socio-economic status were: 1)-2)father's education and occupation, 3) the mean of the combined parental statuses, 4) the children's description of the financial status of the family, 5) number of communication and transportaion devices owned, and 6) the space index. The operational definitions of all these variables are presented in Appendix E.

The correlations among the different measures of socio-economic status (SES) described above are presented in Table IV-1C. Examination of the table reveals that the correlations among the different measures were all positive, but the magnitude of the relationships was not high. Except for the relationship between the combined parental statuses and the individual statuses of the parents which were arithmetically related, the maximum correlation was .57 between father and mother SES. The lowest correlation obtained was .15 between the Space Index and Family Financial Status.

The general low correlations obtained between the Space Index, Number of Communication and Transportation Devices owned, and the responses to the question on Family Financial Status with the three measures of Father, Mother and Family SES indicated that these variables were measuring somewhat different aspects of socio-economic status. However, the general positive nature of the correlation reveals that they were also sharing some common elements.

Table IV-10

Correlations Among Various Indices of Family Socio-economic Status

	Family SES	Father SES	Mother SES	Family Financial Status	Comm., Trans. Devices	Rooms per Person
Family SES	1.00	.89	.89	.31	.42	.24
Father SES	.89	1.00	.57	.28	.36	.21
Mother SES	.89	.57	1.00	.28	.40	.23
Family Financial Status	.31	.28	.28	1.00	.29	.15
Comm., Trans. Devices	.42	.36	.40	.29	1.00	.23
Rooms per Person	.24	.21	.23	.15	.23	1.00

The principal SES measure used was Family SES. This index as explained in Appendix E consisted of the mean of the SES index for the Father and the Mother. Each of these SES indices was obtained by first coding the parent's occupation on a seven-point status scale, similar to the Warner levels with the higher values indicating higher status. Similarly educational attainment was measured on a scale consisting of numbers of years of education completed. Then these indices were transformed to z-scores by subtracting out the mean and dividing by the standard deviation. The result was a number with a mean of zero and a standard deviation of one. These z-scores for occupational and educational status were then averaged to obtain the family SES score.

The relationship between family SES and family size is given in Table IV-11. In this table a mean greater than zero indicates an SES above average, a mean below zero indicates an SES below average.

Table IV-11

Family Socio-economic Staus and the Number of Children in the Family

	Number of Children									
	1	2	3	4	5	6	7	8	9	10+
Mean	0.08	0.32	0.24	0.11	-0.07	-0.16	-0.37	-0.38	-0.43	-0.57
Standard Deviation	0.81	0.78	0.79	0.80	0.80	0.77	0.68	0.69	0.66	0.65

As presented in Table IV-11 there was a strong relationship between family size and socio-economic status. Two-child families had the highest socio-economic status and families with ten or more children had the lowest. For the two-child family socio-economic status averaged +.32 while for families with ten or more children SES averaged -.57. This was a difference of .89 or more than the standard deviations in each group. The overlap in socio-economic status between very large and very small families was probably minimal.

Certain aspects of these results should be carefully noted. First the socio-economic status of one-child families was very near the average for the population (+.08) and was more similar to families having four or five children than to families with two children. The one-child family will be treated later, but suffice it to note that in this sample the sociological regularities underlying family size phenomena did not seem to apply to families with one child only.

A second point to note is that while the decline in SES from two-child families to ten or more children families was continuous, the decline in mean family SES was less after the seventh child. There was relatively little difference in socio-economic status among families with seven, eight or nine children. However these families did have higher average SES than did families with ten or more children.

We had predicted that the larger the family, the lower the socio-economic status. This hypothesis was confirmed. Table IV-11 presents these results. An analysis of variance of this data indicated statistical significance beyond the .01 level.

To test for possible different strengths of the relationship between SES and family size and paternal and maternal SES, analyses were carried out. Both relationships were highly significant as expected. However the eta coefficient was .32 for Father's SES and was .34 for Mother's SES. Hence the Mother's SES was somewhat more related to the number of children the family had than was the Father's SES. These results are presented in Table IV-12

Table IV-12

Mother's and Father's Socio-economic Status and Number of Children in the Family

	Number of Children									
	1	2	3	4	5	6	7	8	9	10+
Father's mean SES	.13	.33	.25	.16	-.04	-.13	-.31	-.31	-.40	-.54
Mother's mean SES	.02	.32	.26	.03	-.09	-.22	-.41	-.47	-.44	-.61

N.B. Standard Deviations ranged from .72 to .92.

It was predicted that smaller families would tend to have higher financial status than larger families. This Family Financial Status variable was based on the child's response to the question:

"Which of the following best describes your family finances?"

The answer alternatives (See Appendix E) ranged from (1) "Barely able to make a living" to (6) "Extremely wealthy". The relationship between family size and the child's response to this question is given in Table IV-13. There was a highly significant relationship ($p \leq .01$, eta = .21) between family size and financial status. The larger the size of the family, the lower its perceived financial status. However, it should also be noted that all of the family sizes had a mean financial status between (2) "Have the necessities" and (3) "Comfortable". Again the families with highest financial status (mean of 2.78) were the two-child families and the families with the lowest financial status were those with ten or more children (mean score of 2.23).

Table IV-13

Family Financial Status and the Number of Children in the Family

	Number of Children									
	1	2	3	4	5	6	7	8	9	10+
Mean	2.65	2.78	2.70	2.70	2.53	2.47	2.44	2.40	2.31	2.23
Standard Deviation	.90	.84	.82	.79	.85	.79	.87	.79	.80	.87

Theoretically it was assumed that a family with few children would be able to build up greater wealth. Wealth was measured in the number of automobiles, television sets, radios telephones, and phonographs owned. In Puerto Rico, the ownership of a telephone is much more indicative of high socio-economic status than it is in the continental United States. The three questions asking about ownership of these devices were transformed to z-scores and then summed to create the index of wealth here called "Number of Communication and Transportation Devices Owned". The distribution of this index of wealth across families of varying sizes is presented in Table IV-14.

The results were significant beyond the .01 level and follow the pattern observed with previously discussed socio-economic measures. Families with only two children had the highest scores (+.20) while families with ten or more children had the lowest scores (-.26). The one-child families were in the middle of the distribution, more similar to the five child families than to any other group. The eta coefficient was .21.

Table IV-14

Index of Number of Communication and Transportation Devices Owned and Number of Children in the Family

Number of Children

	1	2	3	4	5	6	7	8	9	10+
Mean	.01	.20	.18	.10	-.01	-.08	-.08	-.16	-.21	-.26
Standard Deviation	.68	.72	.73	.71	.73	.73	.69	.74	.64	.68

The next measure, the number of rooms per person, is important for two reasons. First the larger the physical space available for each child, within limits, the more he should be able to have privacy to study or to think. On the other hand, the larger the house, the higher the wealth of the family as a rule. The relationship of the number of rooms per person to the number of children in the family is presented in Table IV-15.

Table IV-15

Rooms per Person and the Number of Children in the Family

Number of Children

	1	2	3	4	5	6	7	8	9	10+
Mean	2.00	1.73	1.47	1.34	1.22	1.13	1.09	1.00	.91	.92
Standard Deviation	1.04	.69	.57	.55	.56	.48	.51	.57	.46	.49

The relationship between the number of rooms per person and family size was significant beyond the .01 level and the eta coefficient was .43.

As Table IV-15 shows, the number of persons per room was one of the few SES measures where the one-child families were better off than were the two-child families. As indicated in the table, the small one and two child families had almost twice the space available per person as did the larger families.

Summary of Socio-economic Status

In general in the Puerto Rican sample, families with many children had parents who had lower occupational status and fewer years of education. Small families tended to have more material possessions such as automobiles, telephoned, televisions, and radios and to have more rooms per person in the house. However, the findings with respect to actual size of the house were not as clear, with a possibility that the larger families had, in fact, larger houses while not having as many rooms per person. Children from smaller families reported their families as having better financial status than did children from larger families.

All of these results were significant beyond the .01 level using one-way analysis of variance statistical procedures. The eta coefficient indicated that the strongest relationship (.34) was between Mother's SES and family size, closely followed by Father's SES with a coefficient of .32.

All measures of socio-economic status were positively related to each other. However the relationships ranged from .57 between mother's and father's SES to .15 between rooms per person and the family Financial Status.

In all cases except the rooms per person index, the family size highest on the SES measures was the two-child family instead of the one-child family. In general, families with one child seemed like families with four or five children with respect to most of these SES indicators.

Socio-economic status and Religion - It was predicted that in general Protestant families in Puerto Rico would have more children than Catholic families. This higher fertility among Protestants had been found previously in Puerto Rico by Hill, Stycos and Back (1959). It was also predicted that there would be an interaction between religion and SES with the high socio-economic status Catholics having more children than expected from the main effects of SES and Religion. It was also hypothesized that this interaction would disappear when religiosity was taken into account.

These hypotheses were tested by analyses of variance using religion and SES as main effects and religiosity as a covariate. The results with only the two main effects are presented in Table IV-16. To use SES as a main effect the Family SES variable was divided into five levels (see Appendix E for details). Religion was trichotomized into three categories, Protestant, Catholic, and Other. Because of the small number of people in the Other category, this category was eliminated for this analysis and religion was only either Protestant or Catholic.

As can be seen from Table IV-16 there were strong SES effects and religion also had an effect. There was an interaction in that the highest SES Catholic group had a higher mean family size than the highest SES Protestant group. However the analysis of variance did not find this interaction to be statistically significant. This data is presented in Table IV-17.

Table IV-16

Religion, Socio-economic Status and Number of Children in the Family

Socio-economic Status		Mean Number Children	Catholic S. D.	N	Mean Number Children	Protestant S. D.	N
1	low	6.35	2.73	620	6.48	2.64	102
2		5.32	2.63	1019	5.55	2.61	159
3		4.27	2.26	769	4.78	2.40	139
4		3.79	1.89	419	4.06	1.83	67
5	high	3.79	2.01	163	3.71	2.14	17

Table IV-17

Analysis of Variance: Socio-economic Status and Religion by Family Size

SOURCE	SS	DF	MS	F	P LESS THAN
Within Cells	20627.937	3464	5.955		
SES	2917.426	4	729.356	122.479	0.001
Religion	54.137	1	54.137	9.091	0.003
Interaction	9.903	4	2.476	0.416	0.798

The F-ratios presented in Table IV-17 indicate that the SES effect was considerably stronger than was the effect of religion. Over the entire range of SES, Protestants averaged about .28 more children per family than did Catholics of similar SES level. Catholics of the highest SES actually had .08 more children per family than did Protestants while in the lowest SES group the Protestants averaged about half a child more per family than did the Catholics.

It was predicted that when religiosity was included in the analysis the interaction between religion and SES would disappear. Despite the fact that the interaction failed to be significant, the analysis was run covarying religiosity to see what the impact would be. These results are presented in Table IV-18. Essentially there was no impact of religiosity on either of the main effects, nor was there much change in the non-significant value of the F-ratio for the interaction term. The regression F-ratio of family on religiosity failed to be significant. Hence, contrary to the hypothesis, religiosity had no effect on family size and taking it into account did not affect the main effects of SES and religion.

Table IV-18

Analysis of Variance: Socio-economic Status and Religion by Family Size

Covarying Religiosity

SOURCE	SS	DF	MS	F	P LESS THAN
Within cells	20626.117	3463	5.956		
Regression	1.817	1	1.817	0.305	0.581
SES	2908.320	4	727.080	122 .072	0.001
Religion	48.328	1	48.328	8.114	0.004
Interaction	9.992	4	2.498	0.419	0.795

C. Discussion of Differences between Boston and Bayamon Results

The findings in the two samples have been opposite with respect to the two major variables of socio-economic status and religion. In Bayamon, the higher the socio-economic status, the smaller the family tended to be except for one-child families. On the other hand in Boston, the higher SES people tended to have more children. In Puerto Rico the Non-Catholics had more children per family while in Boston the Catholics were considerably more likely to have large families.

To understand these differences we must look very closely at the two samples. First, in terms of socio-economic class, the Bayamon population was very much lower than the Boston suburban sample. The median incomes of the Boston suburban sample was between $20,000 to $25,000 per family while the median incomes of the Bayamon sample (estimated from the 1960 census data) was between $4,000 and $5,000 per family. Thus there was almost no overlap in the two populations. It is necessary to point out that the high status people in Bayamon were high status relative to other residents in the city, but only very few were comparable to the occupational status "1"s and "2"s of the suburban Boston sample.

In terms of religion, it is also useful to examine the context of the two groups. In Puerto Rico, Catholicism is the religion of better than 85 percent of the population. On the other hand in the continental United States, the Catholic religion is in the minority.

The socio-economic findings can best be understood by postulating a U-shaped relationship. Both very low and very high socio-economic status families will have a tendency to be large, while middle status families will tend to be small according to the U-shaped hypothesis.

The causal mechanisms underlying the two branches of the U may be quite different. For example the left-hand side of the U, where the family size is declining with increasing socio-economic status, may be related to increasing knowledge of birth control methods and increasing willingness to take personal responsibility for their lives and not to just accept as many children as God might send. On the other hand the right-hand portion of the curve, where family size increases with increasing socio-economic position may be related to the parents feeling that they are so well off that they can afford to have extra children, perhaps comparable to having extra automobiles or vacation homes. On this side of the curve the large family size is likely to have been freely chosen.

The contrary results for the effect of religion on family size can be integrated with the U-shaped model by assuming that when a particular religion is in the minority in a country, there will develop either explicit or implicit norms favoring increased family size. The minority religion in Puerto Rico, the Protestants, would then be expected to have higher fertility while the minority religion in the United States, the Catholics, would be expected to have higher fertility here. We would then have two-parallel U-shaped curves, one for the majority religion and one for the minority religion. Figure IV-1 illustrates this theory.

In the suburban Boston sample, only the right-hand portion of the U would be present and there would be a statistically significant increase in family size with socio-economic status. In Bayamon, only the left-hand side would be represented with enough cases to be statistically significant and there would be a relationship with declining family size with increasing socio-economic status.

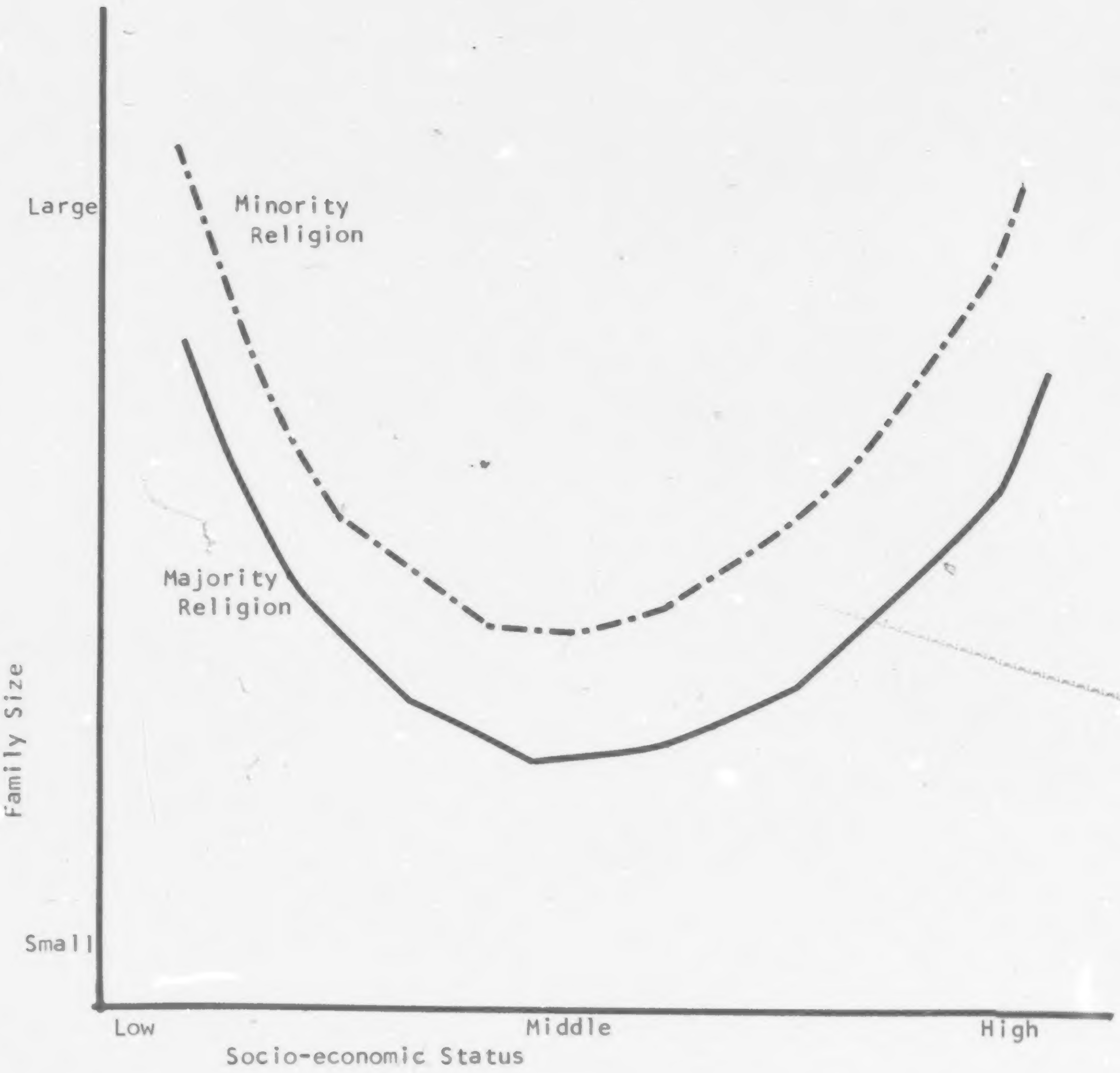

Figure IV-1 U-Shaped Hypothesis

D. Mother's Work History - Suburban Boston Sample

Previous research has shown that the wife's work experience is inversely associated with her expected and attained family size. Weller (1968), using survey data collected in predominantly lower and middle income neighborhoods of San Juan, Puerto Rico, found that participation in the labor force was associated with increased influence by the wife in family decision-making, particularly with respect to having additional children. The result was lower fertility among working women. The same phenomenon occurs in the continental United States. Whelpton, Campbell and Patterson (1966) found that wives who worked after their marriage not only had fewer births at the time of the study than those who had not worked, but also expected significantly smaller completed families. Furthermore, the duration of the wife's work experience was inversely related to the actual and expected number of births.

Educational attainment of wives is another important determinant of expected family size. Whelpton *et al*. (1966) reported that wives with only grade school education expected about 12 percent more births than did those who had gone to high school for one to three years, and 23 percent more than those whose education had extended beyond the third year of high school. However there was no difference in expectations between the wives who had completed high school and those who had attended college.

A couple's ability to control family size, that is, their ability to expect as many children as they want, is also strongly related to their education. Whelpton *et al*. (1966) reported that only 15 percent of the wives with a college education expected more children than they wanted, as compared with 38 percent of those with only a grade school education. However among Catholic women educated in Catholic schools and especially those educated in Catholic colleges, increased education was not associated with successful or low fertility planning (Westoff, Potter & Sagi, 1963). However Westoff & Potvin (1967) found this relationship between college education and fertility to be spurious because when Catholic women arrived in colleges they already had a strong orientation toward large families and they just maintained this same attitude throughout the four years. Thus the Catholic colleges just helped maintain their large family orientation.

Hypotheses - In our study we expected to find that the mothers of the smaller families would be more likely to work outside the home, to be better educated, and if working to hold an occupation of higher social status and to have worked for a longer period of time than mothers of large families.

Educational Attainment of Mothers - While we had found previously that, at least for the Non-Catholics, the more highly educated the husband the more likely he was to father a large family, for the wives the opposite was true. Again the results were significant only for the Non-Catholics, though the trend was the same for the Catholics and it was significant for the total sample. The results are presented in Table IV-19.
These results indicate that the small-family mother tended to be better educated than the large-family mother. The women were considerably less likely than the men to attain graduate doctoral degrees . Only 2.5 percent of the Non-Catholic women and 1.2 percent of the Catholic women attained Ph.D.s, M.D.s, or J.D.s. For this reason Table IV-19 groups the top three levels of educational attainment of the father's table (Table IV-3) into one "Graduate Degree" category.

Table IV-19

Mother's Educational Attainments by Family Size Controlled on Religion

Mother's Educational Attainments	Religion			
	Catholic		Non-Catholic	
	Small Family (N=65)	Large Family (N=194)	Small Family (N=193)	Large Family (N=85)
Graduate Degree	10.8%	5.7%	16.1%	4.8%
Some Grad. School	0.0	2.1	6.7	3.5
College B.A.	18.5	25.3	29.5	55.3
Some College	29.2	33.0	33.2	30.6
High School or less	41.5	34.0	14.5	5.9
	Chi Square (4df) = 5.10		Chi Square (4df) = 22.60	
	Not Significant		Probability less than .001	

As can be seen in Table IV-19, the small family women were considerably more likely to have attained a graduate degree than were the large family women. Among the Non-Catholics, three times the proportion of small family mothers as among large family mothers attained a graduate degree (16.1 to 4.8 percent). The modal pattern for large family, Non-Catholic wives was to have attained a college degree, but not to have gone beyond college. Some 55.3 percent followed this pattern. For the small family Non-Catholic women there was much greater variation with a substantial minority of them only educated at the high school level (14.5 percent) and a substantial minority having gone beyond college (22.8 percent). These same trends were present for the Catholic women, but the differences by family size were not significant.

Comparing Table IV-19 with Table IV-3, the contrasts between the sexes are interesting. For the fathers, large family size was associated with higher attainments in education, while for mothers large family size was associated with lesser educational attainments. The trends are present for both religious groups, but are significant only for the Non-Catholics. As a result of these opposite effects of family size and educational attainments for the husbands and wives, the small families were much more likely than the large families to have greater similarity in the educational attainments of the parents. Even in the small families, however, the husbands were considerably more likely than the wives to have attained higher education. In the small families the husbands were two to three times as likely as the wives to have attained an education beyond college. For the large families, the husbands were five to seven times as likely to have post-college education than the wives.

The proportion of college graduates in this sample who went on to graduate school was examined in terms of sex, family size, and religion. The results are presented in Table IV-20.

Table IV-20

Percent of College Graduates Who Go On to Graduate Education

	Religion			
	Catholic		Non-Catholic	
Spouse	Small Family	Large Family	Small Family	Large Family
Wife	37%	23%	44%	13%
Husband	45	55	69	69

It can be seen that a higher proportion of husbands than of wives went to graduate school, and a higher proportion of Non-Catholics than Catholics. Family size obviously has a striking effect on the educational attainments of the women. While 44 percent of the college graduates among the small family Non-Catholics went on to graduate school, only 13 percent of the large family women college graduates in this group did. For the Catholic women the percents of college graduates going on to graduate school was 37 percent of the small-family mothers and 23 percent of the large-family mothers.

A test for the significance of differences of independent proportions on Table IV-20 indicated that the family size effect was significant only for the Non-Catholic wives. There the difference between 44 and 13 percent of the college graduate wives who went on to graduate school among the small and large family Non-Catholics was significant beyond the .001 level.

From our data it was not possible to determine whether graduate school education came before or after the families had started having children for either the husbands or for the wives. However given the median age at marriage and median age at which most first children were born, it is reasonable to conclude that at least a significant portion of the graduate education attained by the parents who attained it was accomplished after at least some children had arrived. To the extent that this was so, number of children for women can be seen as directly competing with additional years of education beyond college. This is not the case for men, indeed in this data very highly educated men were more likely to father many children than wereless well educated men.

Wives' Working Before Marriage- Women having large and small families differed somewhat in their work history before marriage. The data are presented in Table IV-21.

Table IV-21

Years Mother Worked Before Marriage by Family Size, Controlled on Religion

	Religion			
Years Mother	Catholic		Non-Catholic	
Worked Before Marriage	Small Family (N=65)	Large Family (N=194)	Small Family (N=193)	Large Family (N=85)
Mean (years)	5.52	3.71	3.30	2.29
Standard Deviation	4.50	2.83	3.11	2.44
	t = 3.80		t = 2.63	
	Probability less than .001		Probability less than .01	

On the average the mothers of the small families had worked more years before they were married than had the mothers of the large families. Among the Catholics, the small family mothers averaged 1.81 more years of working than the large family mothers. Among women of other religions this difference was reduced to 1.01 years. The effect was statistically significant in both groups.

A reasonable implication of these findings is that working for several years before marriage reduces the likelihood that a woman will later have a large family. The effect of working history may be stronger for Catholics than for women of other religions.

Given these differences in working history before marriage, the age of marriage for the two family sizes was examined to see if the mothers of large and small families had married at different ages. Among Catholic women, the mothers who later had large families married for the first time at an average age of 22.5 years, while the small-family mothers married at an average age of 24.2 years. This difference of 1.7 years was, however, not significant due to the large variation in the ages of marriage. Among the Non-Catholics, the large-family women married at an average age of 22.2 and the small-family wives married at a mean age of 22.4. This 0.2 year difference was not significant.

Thus while small-family mothers were more likely to work for a longer time before marriage than were large-family mothers, they did not differ significantly in their age at marriage. Among the Catholic women the difference of 1.7 years in age at marriage between small and large-family mothers was of similar magnitude to the 1.8 years difference in working history, the working history difference was significant but the difference in age at marriage was not. There was considerably less variation in the length of time a woman worked before marriage than there was in the age at which she married.

An examination in more detail was conducted of the factors affecting the extent to which a woman worked before marriage. All mothers were combined into one group and an analysis of covariance was run with the number of years working before marriage as the dependent variable and with the independent variables being family size and child spacing. Religion was used as one of the ten covariates.

The results indicated that two of the covariates were quite important, and together accounted for 46 percent of the variance in the time spent working before marriage. As might be expected, the older a woman was when she married, the longer her history of working before marriage. This age at marriage variable accounted for 42 percent of the variance in years worked before marriage. The other important covariate was the amount of education a woman had attained. Again, as might be expected, the better educated woman tended to have worked for a shorter time before marriage. This education-attained variable added 4 percent to the explained variance of years of working before marriage. The other eight covariates added only an insignificant one percent of the variance.

Even after removing the effect of these covariates, family size but not family spacing was still significantly associated with years of working before marriage. Hence it is possible to conclude that, even after taking into account the years available for work (between finishing education and marrying) the extent to which a woman worked was related to her later family size. Women who had a greater length of time working before marriage tended to have fewer children after marriage.

Wives' Working After Marriage- The extent of a woman's participation in the labor force after marriage was examined by means of several different questions. The results did not differ by religion and so are presented for only the total sample. Table IV-22 presents data on the extent to which women of different family sizes had worked after marriage.

Table IV-22

Family Size and Number of Years Mother Worked After Marriage

Years of Work After Marriage for Mother	Family Size Small (N=258)	Large (N=279)
More Than Ten Years	20.5 %	5.0 %
Four to 10 Years	33.3	22.6
Less Than Three Years	26.0	36.9
Did Not Work At All Since Marriage	23.3	35.5

Chi Square (3df) = 36.2

Probability less than .001

While more than 35 percent of the large-family women had never worked after marriage, only about 23 percent of the small family women had thus completely withdrawn from the labor force. On the other hand, the small family women were about four times as likely to have worked quite extensively after marriage, as indicated by having worked for eleven or more years since their marriage. While better than one in five of the small family women had worked for more than ten years since marriage, only one in twenty of the large family women had.

The mean number of years the small-family mothers had worked after marriage was 5.45 years while for the large-family mothers it was 2.96. This gives an average of about two and a half years more of work after marriage for the small-family mothers. The mean years of marriage for the small-family mothers was 19.86 and it was 21.20 for the large-family mothers at the time of the interview. Thus, on the average, the small family mothers had worked about one-fourth of the time since they married while the large family mothers had worked an average of about one-seventh of the time.

Mothers Working When the Children Were Small - The percent of large and small-family women who had worked outside the home when they had a child younger than five years old was then analyzed. There was no family size effect. Some 71 percent of the mothers in both family sizes did not work outside the home when they had a child this young at home. Some 21 percent did work part-time out and about eight percent worked full-time in both family sizes.

Thus while the mothers of small families were more likely to work outside the home in general, and for longer periods of time, they were not more likely to work outside the home when their children were small than were women who had many more children.

An attempt was made to predict the variable of working when the children were small using regression procedures. The dependent variable was coded 1 = Yes, worked full-time, 2 = Yes, worked part-time, and 3 = No, did not work when the children were under age five. Ten variables were used to predict this dependent variable and they jointly accounted for only ten percent of the variance. This was significant beyond the .001 level. No one variable stood out as controlling the prediction. In general the mothers who tended not to work when the children were small had higher family incomes, less education, were younger, had older children, and had married late. Neither family size nor the spacing of the children affected the likelihood that a mother would work while her youngest child was under five years of age. This equation, while significant, left unaccounted for some 90 percent of the variance in this variable. This means that factors other than those included here, perhaps work opportunities near home, child-care facilities, presence of a grandparent or other relative, or the mother's or her husband's attitudes or personality may have been important in this decision.

Working Last Year - The mother was asked if she had worked for pay at any time in the last year. As indicated in Table IV-23 there was a powerful family size effect with the small-family mothers more than twice as likely to have had a regular full-time job during the past year.

Table IV-23

Wife Worked For Pay During Last Year by Family Size

Wife Worked For Pay Outside Home During Last Year	Family Size Small (N=257)	Family Size Large (N=279)
Regular Full-Time Work	23.3%	9.3%
Regular Part-Time Work	27.2	18.6
Occasional Work	11.3	8.2
Did Not Work Last Year	38.1	63.8

Chi Square (3df) = 39.14

Probability less than .001

While almost 64 percent of the large-family mothers did not work at all for pay outside the home during the past year, only about 38 percent of the small-family mothers had not participated at all in the labor force during that time period.

Wife's Plans for Working - If a woman was not working at the time of the interview she was asked if she was planning to get a job, thinking about getting a job or intended to continue as a housewife. Table IV-24 presents the data of family size and holding or planning to obtain a job.

Table IV-24

Working Plans by Family Size

Wife's Job Plans	Family Size	
	Small (N=258)	Large (N=278)
Has a Job Now	53.5%	30.6%
Planning to Get a Job	9.3	8.3
Thinking About Getting a Job	14.7	19.8
Will Continue as a Housewife	22.5	41.4
	Chi Square (3df) = 33.8 Probability less than .001	

Almost twice as many large family mothers intend to continue as housewives, 41.1 percent as contrasted to the 22.5 percent of the small family mothers. On the other hand 53.5 percent of the small family mothers were working at the time of the interview while only 30.6 percent of the large family mothers were working.

Definiteness of Working Plans - To estimate how firm the plans for working might be, mothers who said that they were not working now but were planning to go to work some time later on were asked when that might be. The results are presented in Table IV-25.

Table IV-25

If Wife is Not Working Now But Plans to Go To Work Later, When Will That Be?

When Will Wife Want To Go To Work	Family Size Small (N=55)	Large (N=98)
As Soon As Possible	23.6%	3.1%
In One Year or Less	23.6	27.6
In Two to Five Years	41.8	56.1
In More Than Five Years	10.9	13.3

Chi Square (3df) = 16.10

Probability less than .01

The major difference is that while only about three percent of the large family mothers who hoped to eventually work were looking for a job which could start as soon as possible, almost 24 percent of the small family mothers were.

Type of Job - Women who were working at the time of the interview were asked whether they were working for salary, for wages, or were self-employed. There was no significant difference by family size on this variable. About 42 percent of the working mothers were working for wages, some 50 percent were working for a salary and about nine percent were self-employed.

F. *Multivariate Analysis of Covariance* An examination was made of the influence of family size and child spacing on a set of variables related to the woman's working life. In this analysis the multivariate analysis of covariance procedure was used. Independent variables were family size (large and small) and median child spacing (18 months or less, 19 to 27 months, 28 to 36 months, and over 36 months). The dependent variables were the years a woman worked before marriage, years worked after marriage, whether or not she worked when her youngest child was less than five years old, whether she worked last year, the type of working she did in terms of wages, salary, or self-employed, and her current working or planning to work status.

The covariates included the following variables: age of the youngest child, the mother's religion (Catholic or Non-Catholic), mother's age, father's age, mother's age when she married, father's age when he married, mother's education, father's education, extent of church attendance, and family income.

The major finding was that after removing the effects of the covariates, family size continued to have an effect on the set of mother's working variables with the direction indicating that small family mothers tended to work more than did large family mothers. This effect was significant at the .02 level. Among the set of mother's working variables only two had significant family size effects, the number of years a woman worked before marriage (p less than .05) and the number of years a woman worked after marriage (p less than .001).

The covariates explained 47 percent of the variance in the number of years a woman worked before marriage and 13 percent of the variance in the number of years a woman worked after marriage. For the other dependent variables the covariates accounted for between three and 12 percent of the variance.

There was no significant effect on the working variables from the median spacing of the children although there was a significant interaction between spacing and family size. This interaction seems to indicate that long spacing between children increases the working history of two child mothers but short spacing between children increases the work history of women who have five or more children. The significance level of the interaction effect was .05 for the entire set of working variables and the only univariate significant effect was for years working since marriage with a probability of .014.

When no covariates were removed, the family size effect was significant beyond the .001 level (F = 8.12, with 8 and 522 df) but the child spacing and interaction effects were not significant. When separate analyses were done for Catholic mothers and for Non-Catholic mothers the family size effect for the analysis of covariance with ten covariates removed was not significant for the Catholic mothers but approached significance (p = .052) for the Non-Catholics. The interaction was significant for the Catholics but not for the Non-Catholics.

The conclusion from the set of multivariate analyses of variance is that there is a relationship between family size and working, especially on the number of years a woman has worked after marriage. Mothers of small families tend to work more. There does seem to be a relationship between child spacing interacting with family size in that the women with only two children seem to work more after marriage if there were fairly lengthy interchild intervals, while for the women who have more than five children, short interchild spacings seem to be associated with labor force participation.

E. Family Size and Working Mothers - Puerto Rican Sample

The relationship between family size, work history, and occupational level of the mother in the Puerto Rican sample will be examined in this section. It should be remembered that while the data for the mother's work history in the Suburban Boston sample was obtained through an interview with the mother, the data in the Puerto Rican sample was obtained solely through a questionnaire to her teenage child. Hence there may be less validity expected in the Puerto Rican data.

On the basis of previous research (Whelpton, Campbell, & Patterson 1966; Weller 1968; and others) it had been expected that mothers of small families would tend to have higher occupational and educational status in Puerto Rico. This hypothesis was confirmed by the data presented in Table IV-26. An eta coefficient of .34 was obtained between occupational and educational status and family size. Thus mothers of small families had more education and held higher level jobs.

Table IV-26

Mother's and Father's Socio-economic Status and Number of Children

	Number of Children									
	1	2	3	4	5	6	7	8	9	10+
Father's Mean SES	.13	.33	.25	.16	-.04	-.13	-.31	-.31	-.40	-.54
Mother's Mean SES	.02	.32	.26	.03	-.09	-.22	-.41	-.47	-.44	-.61

(This is the same as Table IV-12).

Mothers' Work History - Bayamon Sample - The relationship between work history and family size was also explored. Mothers with smaller families tended to work more as revealed by an eta coefficient of .21 which was significant beyond the .01 level. The data are presented in Table IV-26 a.

Table IV-26 a

Total Years Mother Worked and the Number of Children in the Family

	Number of Children									
	1	2	3	4	5	6	7	8	9	10+
Mean	3.21	3.38	2.98	3.06	2.58	2.48	2.27	2.50	2.16	2.05
Standard Deviation	2.16	2.12	2.11	2.13	1.94	1.93	1.85	1.97	1.72	1.77

Examining Table IV-26a reveals that the relationship between working and family size was not as consistent through the different sizes of family as some of the other indices previously analyzed. Also it is useful to note that the standard deviations were large relative to the means and that the distributions were skewed. Nevertheless, as predicted, it was the mothers of the two-child families who had the longest work histories. This same group of women also held the highest status jobs, on the average. The mothers of ten or more children had the shortest work histories. Contrary to the findings using the socio-economic indices, the working histories of the mothers who had only one child were more similar to those of mothers with two children than to mothers with four or five children. This indicates that having few children, even when the small family size may be involuntary, leads to greater participation in the labor force by women.

F. The Case of the One-Child Family - Bayamon Sample

The findings hitherto presented for the Puerto Rican sample have indicated that the one-child family behaved differently from its nearest neighbor, the two-child family in terms of these sociological variables. With regard to the sociological variables, the one-child family seemed to be more similar to the four and five-child families than to the two-child family. The one-child family was much more likely to have moved to Bayamon from outside the island and to consist of parents who were not native Puerto Ricans also.

One possible explanation regarding the unique behavior of the one-child family is that this size was not due to choice but was forced on the parents by subfecundity. If the reason for having one child was biological rather than social or psychological then these families should fall on the average in the middle of the sociological spectrum. As will be described in the section of the report dealing with children's perceived parental behavior the one-child parents are seen as behaving more like parents of four and five children than like parents of two children.

Since the parents were not interviewed in the Puerto Rican sample and the children were not asked questions about the fertililty of their parents it was difficult to test the hypothesis of subfecundity directly. Only one variable possibly related to fecundity could be obtained and that was age of the mother at the birth of the child filling out the questionnaire. If the reporting child happened to be the oldest child in his family then the age of the mother when she had the first child could be determined and this could be used as an index of infertility.

The difficulty with this approach was that sometimes the oldest child in school who was used as the informant for the total family was not the oldest child in his total family but the second or third. This situation was more common of the large families and would tend to bias the ages of the mothers upward.

We hypothesized that if the one-child family was indeed due to subfecundity this would be manifested in the mother of the one child being older, on the average, when that child was born.

To test this hypothesis the age of the mother when the reporting child was born was examined for three different "small" family sizes, the one-child, the two-child, and the three-child. The median age of the mother at the birth of the reporting child for the one-child families was in the 29-32 years old range. (The use of a range was necessary due to the reporting categories of the question which asked mother's age.) For the two-child mothers her age at the birth of the child had a median of 21-25 and for the three-child mothers it was 22-26. These results strongly support the subfecundity hypothesis. The interquartile range for the one-child family was 24-28 to 34-37 years old while for the two-child family it was 17-21 to 25-29 years. For the three-child family the interquartile range of age of mother at the child's birth was 18-22 to 25-29. These results indicate that the median age at birth of the one-child mothers was above the age of at least 75 percent of the two and three-child mothers.

Extending the analysis of the subfecundity hypothesis further, the sex ratio of the one-child families was examined. In this sample there were roughly two girls for every boy in the one-child families. A reasonable interpretation of this finding is that this live birth was not the first pregnancy for many of these mothers and that a differential fetal mortality was working against males. Other biological research has previously found a higher ratio of male to female fetuses suffering spontaneous abortion.

Geographic Mobility - Suburban Boston Sample

It was predicted that parents from a more rural background would be more likely to have larger families than those from an urban or metropolitan background. We also expected that those families with an extensive horizontal mobility history would have lower fertility than would life-long residents of the community. Parents who had many family ties close by were expected to have large families. In general, the more a family was integrated into the community by years of residence and family ties, the more likely they would be to procreate a big family.

Geographic mobility was measured in several different questions. One question asked what type of community the wife lived in before moving to the family's present suburban Boston location. These data are presented in Table IV-27.

Table IV-27

Type of Prior Community by Family Size

	Small Family (N = 258)	Large Family (N = 276)
City	44.2%	34.4%
Small Town	14.7	24.3
Suburb	39.5	40.6
Farm Country	1.6	0.7
	100.0%	100.0%

Chi-Square (3 df) = 10.28

Prob. = .016

The significant difference in this table is between City and Small Town background, with the small-family wives more likely to come from a city and the large-family wives more likely to come from a small town. Roughly forty percent of both family sizes came from a suburban background and less than two percent of each family size came from rural areas. Thus there were too few of these wives with a rural background to test that hypothesis but the small-family mothers did tend to be more likely to have a City background.

Not significantly related to family size were several alternate measures of geographical mobility such as the number of residences since marriage, the type of community the wife spent most of her life in, the type of community the wife was raised in, and the type of community the husband was raised in.

The lack of significance for the number of residences since marriage indicates that the hypothesis of family size being related to the extent of geographical mobility was not supported.

The extent to which a family had close family ties was indexed in several ways. One way was to examine where the wife and the husband were born, with the assumption that if they were born abroad, they should have fewer family ties nearby than if they were born in the United States. Some 88.4 percent of the small-family wives were born in the United States while 11.6 percent were not. For the large-family wives 95.0 percent were born in this country while only five percent were not. This difference was significant beyond the .01 level of significance using a Chi-Square test corrected for continuity. Hence the small-family wives did tend significantly more often to be born abroad.

The question of extent of having family living in the U.S. was carried one generation further back by examining the birthplaces of the parents of the wife and of the husband. The reasoning is that families who have parents of the spouses born in the United States will be more likely to have many relatives living nearby. These data are presented in Table IV-28.

Table IV-28

Percent of Parents of Spouses Born Abroad by Family Size

	Small Family	Large Family	Chi-Square (1 df)	Probability Level
Wife's Father	37.2%	20.9%	16.47	.001
Wife's Mother	34.1%	22.6%	8.25	.005
Husband's Father	39.3%	25.5%	10.97	.001
Husband's Mother	34.2%	28.4%	1.85	N.S.

This table indicates that for both of the wife's parents and for the husband's father the small-family spouses were more likely than the large-family spouses to have had their own parents born abroad.

For the husbands themselves, some 89.9 percent of the small-family husbands were born in the United States and 10.1 percent born abroad. For the large-family husbands 96.8 were born in this country and only 3.2 percent were born in a foreign country. This differences was significant beyond the .01 level.

These analyses support the hypothesis that families with fewer relatives living in the same country tend to have smaller families.

One index of the extent to which a family was integrated into the community was the number of years they had lived in the community. The data relating to this question are presented in Table IV-29.

Table IV-29

Number of Years in the Community by Family Size

Years in the Community	Percents Small Families (N = 258)	Large Families (N = 279)
1 to 4 years	15.1%	11.8%
5 to 10 years	36.0	28.0
10 to 15 years	24.0	24.0
16 or more years	24.8	36.2

Chi-Square (3 df) = 9.50

Probability = 0.0233

This table indicates that the large families are indeed more likely to be longterm residents of their town. While about one in four of the small-families had lived in their town for more than sixteen years more than one out of three of the large-families had done so.

However two other measures did not show an association with family size. One asked how many people the family knew in the neighborhood and the other asked whether or not there were close relatives in the neighborhood. On these two measures the families of different sizes were not significantly different.

In summary, there was some evidence that families who have had greater geographic mobility and who have had foreign born parents or were born abroad themselves tended to have smaller families. However,when the index used was the integration of the family in the neighborhood, meaning the number of people known in the neighborhood or the presence in the neighborhood of close relatives, families of different sizes did not differ significantly.

Social Mobility - The concept of social mobility is related to geographic mobility with respect to family size in that the more mobile families should generally tend to have fewer children. As an indicator of social mobility the mothers were asked whether their living conditions were better or poorer than her parents or than her husband's parents. There was no relationship by family size in either religious group and the two religious groups did not differ significantly from each other. For the sample as a whole, 20.7 percent felt that their families were living about the same as their parents, 8.0 percent felt their families were worse off and 71.2 percent felt that they were living better than their parents.

Thus in this population, the social mobility hypothesis did not hold. There was no relationship between social mobility and fertility. This population was a highly upwardly mobile one, and there may not have been sufficient variation in the question used to measure the various degrees of upward mobility.

G. Age at Marriage - Boston Suburban Sample

It was predicted that the older the couple were when they married, the more likely they would be to have a small family. It was also predicted that the larger the size of the family of origin of the parents, the more likely they would be to procreate a large family.

It was found that the age of the wife at marriage was related to family size, but the age of the husband at marriage was not. The data for the wives is presented in Table IV-30. The major difference indicated in this table is for those wives who married after age 30. Of these wives who married after age 30 some 83 percent had small families while only 17 percent had large families in this sample. On the other hand there was little differentiation in family size in this sample for those wives who married younger than age 30.

Table IV-30

Influence of Age at First Marriage on Family Size

Age at First Marriage	Family Size Small	Large	Total	Number
Under 18	47%	53%	100%	36
19 to 21	50%	50%	100%	176
22 to 25	43%	57%	100%	238
26 to 29	51%	49%	100%	69
30 or older	83%	17%	100%	18

Chi-Square (4 df) = 11.62, Probability = 0.0204

The effect of the size of the family of origin was examined on the size of the family of procreation. In this data there was no significant association between the number of brothers and sisters a woman had and the number of children she, herself, later had. However there was a significant association between the size of the family the husband grew up in and the number of children which he procreated. The data for the husbands is presented in Table IV-31. This table indicates a relatively strong association. Husbands who themselves grew up in families with five or more than five children were almost twice as likely to have five or more children themselves (38 percent had two children, 62 percent had five or more in this sample). On the other hand among those husbands who grew up in a one or two-child family, some 59 percent had only two children while 41 percent had five or more in this sample.

Table IV-31

Effect of size of Husband's Family of Orientation on Size of Family of Procreation

Size of family of orientation	Family Size of Procreation Small	Large	Total	Number
One or Two Children	59%	41%	100%	203
Three or Four	43%	57%	100%	194
Five or More	38%	62%	100%	138

Chi-Square (3 d.f.) = 19.81, Probability less than .0002

In summary then, the age at which the wife married, especially in terms of marrying before or after age 30 affected the later size of her family but the age at which the husband married was not related to the number of children he had. On the other hand the number of children in the family in which they grew up did not affect the number of children a woman later had, but did affect the number of children a man later had.

H. Recreation Patterns and Family Size - Suburban Boston Sample

This section of the report deals with the effects of family size on recreational patterns. It was expected that large family parents would in general tend to have more "family" oriented recreation and that small family parents would tend more toward "adult" oriented recreation. Further, it was expected that the large families would tend to participate more in low cost recreational activities while the small families would be more likely to enjoy more expensive recreational patterns.

Thus it was predicted that parents of small families would attend more cultural activities of an expensive and adult-oriented nature such as theatre, opera, and skiing. They were also expected to travel abroad more. On the other hand the parents of large families were predicted to favor recreation which is more child oriented, involves the whole family, and is less expensive in nature such as camping and drive-in movies.

Parents of large families were expected to tend to entertain relatives or friends of similar sized families. Small family parents were predicted to tend to entertain couples, friends of similar small-sized families, and professional colleagues or business friends. On the average, small families were predicted to have a more active, varied, and mobile social life than did large families.

While religion had not been expected to be a differentiating factor in recreational patterns, during the analysis it was found to be an important variable. In the analyses reported here, religion was controlled by running separate crosstabulations for Catholics and for Non-Catholics. The religion of the mother was used as the religion of the family.

Family size in these analyses was dichotomized into "small" families and "large" families. A small family had exactly two children, a large family had five or more children.

Movie attendance was seen as an "adult" relatively high cost recreational activity and hence it was predicted that it would be more common among small family parents. Table IV-32 gives the results for movie attendance by husbands and Table IV-33 gives the results for wives.

Among the Catholics there was no significant difference in movie attendance behavior by family size, while there was a significant effect of family size among the Non-Catholics. The direction of influence was as expected, with the small family parents of both sexes attending movies more often than did the large-family parents. This effect was especially strong for the Non-Catholic fathers where only 4.4 percent of the large family fathers attended movies more than once a month while some 18.8 percent of the small family fathers did.

It is important to note, however, that the modal pattern of movie attendance for all groups was one to five times per year. More than half of all groups except for the small-family Non-Catholics fell into this category and in this group some 45 percent of the husbands and 42 percent of the wives also attended movies from one to five times per year.

Table IV-32

Husband's Movie Attendance by Family Size, Controlled on Religion

Frequency of Attendance at Movies	Catholic Small Family (N=46)	Catholic Large Family (N=134)	Non-Catholic Small Family (N=149)	Non-Catholic Large Family (N=68)
Every 2-3 weeks or more often	4.3%	10.4%	18.8%	4.4%
Six to 12 times per year	21.7	14.9	30.2	29.4
One to Five times per year	52.2	62.7	45.0	55.9
Not this year	21.7	11.9	6.0	10.3
	100%	100%	100%	100%

Chi-Square (3df) = 5.29 Chi-Square (3df) = 9.06

Prob. Not Significant Prob. less than .05

Table IV-33

Wife's Movie Attendance by Family Size, Controlled on Religion

Frequency of Attendance at Movies	Catholic Small Family (N=65)	Catholic Large Family (N=194)	Non-Catholic Small Family (N=193)	Non-Catholic Large Family (N=85)
Every 2-3 weeks or more often	4.6%	7.7%	14.0%	11.8%
Six to 12 times per year	24.6	23.7	38.9	24.7
One to Five times per year	50.8	57.2	42.5	51.8
Not this year	20.0	11.3	4.7	11.8
	100%	100%	100%	100%

Chi-Square (3df) = 3.76 Chi-Square (3df) = 9.12

Prob. Not Significant Prob. less than .05

These tables also indicate that movie going was much more popular among Non-Catholics than among Catholics. Among the fathers, 14.3 percent of the Non-Catholics attended movies every two or three weeks or more often while only 8.9 percent of the Catholic fathers did.

Attendance at museums, exhibits and fairs indicates a similar pattern for fathers. Among Non-Catholic fathers, those with only two children tended to attend these cultural events more frequently than did the large family fathers. As indicated in Table IV-34 while some 41 percent of the small family Non-Catholic fathers were attending these events at least six times a year, only 25 percent of the large family fathers did.

Museum, exhibit and fair attendance was not significantly different for family size among Catholic fathers and mothers.

Table IV-34

Husband's Attendance at Museums, Exhibits or Fairs by Family Size, Controlled on Religion

	Catholic		Non-Catholic	
Frequency of Attendance at Museums etc.	Small Family (N=45)	Large Family (N=131)	Small Family (N=145)	Large Family (N=68)
Six times a year or more	35.6%	29.8%	41.4%	25.0%
One to Five times a year	48.9	58.0	50.3	72.1
Not this year	15.6	12.2	8.3	2.9
	100%	100%	100%	100%
	Chi-Square(2df) = 1.15		Chi-Square(2df) = 9.25	
	Prob. Not Significant		Prob. less than .01	

Overall, Non-Catholic fathers reported more active participation in these cultural activities than did the Catholic fathers: 13.1 percent of the Catholics as contrasted to 6.6 percent of the Non-Catholics indicated that they had not attended any museums, exhibits or fairs in the past year.

Table IV-35

Husband's Going Out to Dinner by Family Size, Controlled on Religion

	Catholic		Non-Catholic	
Frequency of Going Out to Dinner	Small Family (N=45)	Large Family (N=134)	Small Family (N=149)	Large Family (N=68)
Once a Week or more often	22.2%	29.1%	26.2%	7.4%
Every 2-3 weeks	35.6	29.1	29.5	20.6
Six to 12 times per year	28.9	23.9	28.2	54.4
One to Five times per year or less often	13.3	17.9	16.1	17.6
	100%	100%	100%	100%
	Chi-Square(3df) = 1.80		Chi-Square(3df) = 18.44	
	Prob. Not Significant		Prob. less than .001	

Family size had a marked effect on the frequency with which Non-Catholic fathers ate dinner at restaurants. Although slightly more than 26 percent of the two-child fathers went out to dinner at least once a week, only about seven percent of the large family fathers went. Again, there was no significant family size effect among the Catholic fathers.

Sporting events present a different picture. As before, there were no significant relationships between the number of children in a family and attendance or participation in sporting activities among the Catholic families in this sample. There was, however, a marked tendency for large family Non-Catholics to participate in and attend sports activities when compared to small-family Non-Catholic parents. Participation in sports can be seen as an example of the "family-oriented" recreation which was predicted to be more common among the large-family parents. Sports attendance is more ambiguous since attendance at professional games is expensive and is more likely an "adult" pattern, while attendance at Little League or other school and amateur or school athletics is likely to be a "family" pattern.

Table IV-36

Husbands' Attendance at Sporting Events* by Family Size, Controlled on Religion

Frequency of Attending Sporting Events	Catholic Small Family (N=65)	Catholic Large Family (N=193)	Non-Catholic Small Family (N=192)	Non-Catholic Large Family (N=85)
Once a week or more often	13.8%	21.2%	5.2%	20.0%
Every 2-3 weeks	9.2	18.1	9.4	8.2
Six to 12 times per year	26.2	25.9	24.5	22.4
One to Five times per year	24.6	19.2	33.9	34.1
Not this year	26.2	15.5	27.1	15.3
	100%	100%	100%	100%

Chi-Square(4df) = 7.51 Prob. Not Significant

Chi-Square(4df) = 16.91 Prob. less than .01

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* Based on wives' report on husbands' attendance.

Table IV-37

Wives' Attendance at Sports Events by Family Size, Controlled on Religion

Frequency of Attending Sporting Events	Catholic Small Family (N=65)	Catholic Large Family (N=194)	Non-Catholic Small Family (N=192)	Non-Catholic Large Family (N=85)
Once a week or more often	12.3%	17.0%	4.2%	16.5%
Every 2-3 weeks	9.2	15.5	9.4	10.6
Six to 12 times per year	26.2	24.3	16.7	14.1
One to Five times per year	20.0	20.6	29.7	32.9
Not this year	32.3	21.6	40.1	25.9
	100%	100%	100%	100%
	Chi-Square(4df) = 4.34		Chi-Square(4df) = 15.10	
	Prob. Not Significant		Prob. less than .001	

Among the Non-Catholics, large family parents were about four times more likely to attend sports events once a week than were parents of small families. The direction was the same for the Catholic parents but instead of being a 4:1 ratio it was only a 3:2 ratio and was not significant.

The large family mothers were more likely to participate in sports than were the small family mothers. This tendency was significant for the Non-Catholic mothers and in the same direction but not significant among the Catholics.

Table IV-38

Wives' Participation in Active Sports by Family Size, Controlled on Religion

Frequency of Participation in Sporting Activities	Catholic Small Family (N=65)	 Large Family (N=194)	Non-Catholic Small Family (N=193)	 Large Family (N=84)
Twice a Week or more often	9.2%	16.0%	16.6%	22.6%
Once a Week	15.4	15.5	8.8	20.2
Every 2-3 weeks	9.2	9.3	6.2	9.5
Six to 12 times a year	13.8	8.2	12.4	7.1
One to Five times a year	6.2	10.3	9.3	7.1
Not this year	46.2	40.7	46.6	33.3
	100%	100%	100%	100%
	Chi-Square (5df) = 4.38		Chi-Square (5df) = 12.54	
	Prob. Not Significant		Prob. less than .05	

The general pattern has been for the recreational activities to differ by family size among the Non-Catholic parents but not among the Catholic parents. This was also true for the recreational activity of "working on a hobby" as indicated in Table IV-39.

Table IV-39

Husbands' Working on Hobbies by Family size, Controlled on Religion

Frequency of Working Hobbies (Reported by Husband)	Catholic Small Family (N = 144)	Catholic Large Family (N = 65)	Non-Catholic Small Family (N = 46)	Non-Catholic Large Family (N = 128)
Twice a week or more often	13.9	12.7	23.9	6.2
Once a week to every 3 weeks	30.6	26.1	15.2	18.0
Six to 12 times per year	13.9	10.8	13.0	15.6
One to Five times per year	15.3	18.5	10.9	21.1
Not this year	26.4	32.3	37.0	39.1
	100%	100%	100%	100%

Chi-Square (4 df) = 1.55
Prob. Not Significant

Chi-Square (4 df) = 11.93
Prob. less than .05

As Table IV-39 shows, Non-Catholic fathers with only two children were more likely to be involved with their hobbies at least twice a week than were those fathers with five or more children. This hobby activity did not differ by family size among the Catholic fathers.

For both religious groups the activity of visiting with friends of the same sex differed by family size for the husbands. As indicated in Table IV-40, small family fathers were more likely to spend time visiting with same-sex friends than were the large family fathers. In both family sizes about ten percent of the fathers visited with friends once a week or more often. The differences came in the next most frequent category where the small family fathers were twice as likely (among Catholics) or six times as likely (among Non-Catholics) to visit with friends once every two or three weeks.

Table IV-40

Husbands' Visiting with Same Sex Friends by Family Size, Controlled on Religion

	Catholic		Non-Catholic	
Frequency of Visiting Same Sex Friends	Small Family (N=46)	Large Family (N=131)	Small Family (N=147)	Large Family (N=65)
Once a week or more often	10.9%	9.9%	10.9%	10.8%
Once every 2-3 weeks	26.1	12.2	19.0	3.1
Six to 12 times per year	28.3	21.4	15.6	23.1
One to five times per year	19.6	42.0	34.7	47.7
Not this year	15.2	14.5	19.7	15.4
	100%	100%	100%	100%
	Chi-Square(4df) = 9.61 Prob. less than .05		Chi-Square(4df) = 11.94 Prob. less than .05	

Volunteering by both husbands and wives, for both religious groupings differed by family size. These results are presented in Table IV-41 and in Table IV-42. Large family parents were more likely to be involved in voluntary activities than were small family parents. The relationship is rather complicated, as can be seen by examining the tables. Among the Catholics, it seems that the small family parents were much more likely not to be involved in any voluntary activities than were the large family parents. For example while 40 percent of the small family Catholic fathers had not volunteered in the past year, only about 22 percent of the large family Catholic fathers had not done so. For the Catholic wives, some 29 percent of the small family mothers and only 13 percent of the large family mothers had done no volunteering.

While the direction of the relationship was the same, that is the large family parents doing more volunteering, the difference seemed to be at the other end of the frequency scale among the Non-Catholics. Thus while some 18 percent of these large family fathers volunteered at least once a week, only 7.5 percent of the small family fathers did. Similarly among the Non-Catholic mothers, 25 percent of the large family mothers volunteered more than once a week, only 13 percent of the small family mothers did.

Another aspect of the recreational use of time was the visiting patterns of the families. The families with whom each respondent family visited regularly were classified in terms of the number of children in that family. As reported in Table IV-43 there is an association between the number of children in the families most often visited and in the number of children in the families in our study. Generally the large families were friends with and visited other large families, while the small families were more likely to be friends with and visit other small families.

Table IV-41

Husbands' Volunteering Activity by Family Size, Controlled on Religion

Frequency of Participation in Volunteer Activity	Catholic Small Family (N=45)	Catholic Large Family (N=134)	Non-Catholic Small Family (N=147)	Non-Catholic Large Family (N=66)
Once a week or more often	17.8%	14.2%	7.5%	18.2%
Every 2 or 3 weeks	8.9	9.7	13.6	3.0
Six to 12 times a year	15.6	12.7	8.8	18.2
One to five times a year	17.8	41.8	40.8	33.3
Not this year	40.0	21.6	29.3	27.3
	100%	100%	100%	100%

Chi-Square(4df) = 10.28 Prob. less than .05 (Catholic)

Chi-Square(4df) = 13.87 Prob. less than .01 (Non-Catholic)

Table IV-42

Wives' Volunteering Activity by Family Size, Controlled on Religion

Frequency of Participation in Volunteer Activity	Catholic Small Family (N=65)	Catholic Large Family (N=194)	Non-Catholic Small Family (N=192)	Non-Catholic Large Family (N=84)
Twice a week or more often	12.3%	10.8%	13.0%	25.0%
Once a week	18.5	22.2	16.1	10.7
Once every 2 or 3 weeks	15.4	12.9	12.5	17.9
Six to 12 times a year	10.8	21.6	7.3	10.7
One to five times a year	13.8	19.1	25.5	15.5
Not this year	29.2	13.4	25.5	20.2
	100%	100%	100%	100%

Chi-Square(5df) = 11.45 Prob. less than .05 (Catholic)

Chi-Square(5df) = 11.54 Prob. less than .05 (Non-Catholic)

Table IV-43

Number of Children in the Families of Close Friends by Family Size, Controlled on Religion

	Catholic		Non-Catholic	
Number of Children in Families of Friends	Small Families (N=62)	Large Families (N=184)	Small Families (N=187)	Large Families (N=81)
None or One	9.7%	8.7%	11.8%	3.7%
Two	37.1	17.4	36.4	22.2
Three	29.0	20.7	32.6	24.7
Four	16.1	21.7	15.0	28.4
Five	4.8	10.9	2.7	14.8
Six or More	3.2	20.7	1.6	6.2
	100%	100%	100%	100%
	Chi-Square(5df) = 20.72		Chi-Square(5df) = 31.07	
	Prob. less than .001		Prob. less than .001	

This congruence of family sizes among friends was quite striking. For both religious groups the small families were almost twice as likely to have as friends families with two or fewer children. For the total sample some 48 percent of the two-child families had friends who had two or fewer children while for the large families only 26 percent of their friends' families had two or fewer children.

Looking at the other side, large families were more than five times as likely to have friends who also had large families than were small families. While only 5 percent of the two-child families had friends who had five or more children, some 28 percent of the large families did.

In summary, the hypotheses were generally upheld, especially for fathers and for Non-Catholic parents. In general, parents with small families tended to pursue activities which were more expensive and were geared to adults, such as going to movies, museums, restaurants and visiting with other adults. Hobbies also were more likely to be indulged in by the small family fathers. Parents with large families were considerably more likely to participate in pastimes which were less expensive and which involved the whole family,such as attending or participating in sports events. The large families seemed to be much more tied to the community as evidenced by their considerably greater involvement in voluntary activities.

However, the effect of family size on leisure activities must take the religion of the family into account. The number of children in the family seemed to have less effect on the life style of Catholics than those of other religions. In general Catholics were more likely than Non-Catholics to engage in family oriented recreational activities such as athletics regardless of family size. In general the patterns of recreational activities of small family Catholics did not differ too much from those of large family Catholics.

In these analyses there was more frequently a significant effect of family size for the husbands than for the wives. As far as leisure time activities, family size per se seemed to have been a stronger influence on the husbands than on the wives.

1. Savings and Investment Behavior by Family Size - Suburban Boston Sample

It was predicted that the parents of small families, especially where the wife works, would tend to save and invest more, to borrow minimally and generally to be more financially comfortable than were the parents of large families. This section of the report examines those hypotheses.

Saving Behavior - There were no significant differences in families having savings accounts by family size for either religious group and the religious groups did not differ between themselves. For the sample as a whole, 93 percent had savings accounts and only seven percent did not.

Table IV-44

Saving Behavior by Family Size Controlled on Religion

Saving Behavior	Religion			
	Catholic		Non-Catholic	
	Small Family (N=62)	Large Family (N=181)	Small Family (N=187)	Large Family (N=83)
Save every cent I can	9.7%	4.4%	11.8%	13.3%
Save a definite amount and spend whatever remains	41.9	46.4	43.3	33.7
Save occasionally	38.7	32.0	33.2	27.7
Don't save very much	9.7	17.1	11.8	25.3
	Chi Square (3df) = 4.71 Not Significant		Chi Square (3df) = 8.57 Probability less than .05	

Despite the higher incomes, on the average, of the large family Non-Catholics they were able to save less of their income than were the small-family Non-Catholics. These results are reported in Table IV-44. For both religious groups, but significantly only for the Non-Catholics, the large families, as contrasted with the small families, had double the proportion who said that they "Don't save very much."

There were no family size effects for either religious group on the ownership of stocks and bonds. For the total sample, some 71 percent did own some stocks and bonds and 29 percent did not. The mothers were not asked about the value of their holdings.

For investments in real estate, there was a family size effect, significant at the .01 level, for the Non-Catholic families. In this group 24 percent of the small families and 40 percent of the large families had investments in real estate. For the Catholic families 23 percent of the small families and 25 percent of the large families had real estate investments. This result was in keeping with the general greater wealth of the large Non-Catholic families but in opposition to the lower savings patterns for these families.

The mothers were asked about their buying patterns in terms of paying cash or buying on the installment plan. There was no significant family size effect for either religious group, but the effect for the Non-Catholics came close to being significant at the .05 level. Among these families, some 32 percent of the small families as contrasted to 44 percent of the large families were able to pay cash for everything. Among the Catholic families 22 percent of the small families and 17 percent of the large families said they always paid cash.

J. Husband and Wife Planning for their Family Size

The wives were asked how many children they and their husbands thought they would have before their marriage. First they were asked how much they had thought about the question of how many children they would have after marriage. The response categories were: "A Lot", "Some", "Only a Little", and "Not at All". There was no significant difference by family size, but there was a non-significant trend (at the .10 level) for large family mothers to be more likely to say "A Lot".

There was a significant difference by religion. The Catholic mothers were more likely to say "Not at All" than were the Non-Catholic mothers. This trend was significant at the .05 level. While 31.1 percent of the Catholic mothers said "Not at All", only 20.3 percent of the Non-Catholic mothers did.

Next the mothers were asked how many children in total they thought they would like to have. They were then asked the same question about what they thought their husbands wanted to have before marriage. The results are presented in Table IV-45.

This table indicates that the mothers who eventually had five or more children wanted, before their marriage to have an average of 5.14 children for the Catholics and 4.49 children for the Non-Catholics. In contrast, the mothers who eventually had only two children originally wanted an average of 3.38 children among the Catholics and only 2.82 among the Non-Catholics. There was thus a powerful and significant association between how many children a woman wanted before she married and how many she eventually had.

Table IV-45

Wanted Number of Children Before Marriage by Eventual Family Size

	Religion			
Wife's Report of How	Catholic		Non-Catholic	
Many Children Wanted	Small Family	Large Family	Small Family	Large Family
Wanted by Wife	(N=59)	(N=189)	(N=180)	(N=83)
Mean Number Children	3.38	5.14	2.82	4.49
(Standard Deviation)	(1.60)	(2.00)	(1.43)	(2.08)
Percent Saying "As Many as God Sends"	10.2%	30.2%	8.9%	13.3%
	t = - 5.72		t = - 7.15	
	Probability less than .001		Probability less than .001	
Wanted by Husband	(N=49)	(N=180)	(N=153)	(N=78)
Mean Number Children	3.36	5.35	2.54	3.89
(Standard Deviation)	(1.78)	(2.31)	(1.06)	(2.11)
Percent Saying "As Many as God Sends"	20.4%	42.2%	26.8%	28.2%
	t = - 4.85		t = - 5.55	
	Probability less than .001		Probability less than .001	

The results for the number of children wanted by the husbands, as reported by the mothers, were similar. The women did report that their husbands were more likely than themselves to say that they wanted as many children as God sends. The large family Catholics, both husbands and wives, were quite likely to give this response, with some 30 percent of the wives and 42 percent of the husbands saying that they wanted as many children as God might send them.

K. Educational Aspirations for Children by Family Size

The educational aspirations parents had for their children were examined by asking the mothers "If your sons (daughters) were capable and willing, how far would you like your sons (daughters) to go in school?". Two questions were asked, one for sons and one for daughters, and the response alternatives given were: High School, Obtain a High School Diploma, Obtain a Bachelor's Degree, Obtain a Master's Degree, and Obtain a Doctoral Degree. The mothers were encouraged to discuss each son or daughter if they did not want to generalize and if they did not have a son or a daughter they were asked to suppose that they did have one.

The results were analyzed in two ways, in terms of educational aspirations for Sons from small and from large families and in terms of Daughters from the two sized families.

The analysis indicated that large and small families did not differ in their aspirations for daughters, but that they did differ in their aspirations for sons. The small families had significantly higher aspirations for their sons than did large families. The small families had aspirations for the doctoral degree for their sons in 39 percent of the cases as contrasted with only 28 percent of the large families. On the other hand, about 58 percent of the large family mothers expected their sons would at most finish college while only about 45 percent of the small family mothers felt that college graduation was the highest education likely for their sons. The Chi-Square (3 df) for this sons by family size table was 8.95 which was significant at the .05 level.

Another way of examining this data was to look at the differential aspiration by sex of child among large and small families. Table IV-46 presents this data. It is possible to rearrange the columns to obtain the tables discussed above where family size affecting the educational aspirations of sons and daughters was examined.

Table IV-46

Differential Educational Aspiration for Sons and Daughters by Family Size

Mother's Education Aspirations	Family Size Small Daughters (N=187)	 Small Sons (N=175)	 Large Daughters (N=225)	 Large Sons (N=222)
Doctorate	25.7%	38.9%	21.8%	27.9%
Masters	15.5	16.6	13.3	14.4
Bachelors	53.5	38.9	57.3	53.6
Less than B.A.	5.3	5.7	7.6	4.1
	Chi Square (3df) = 9.16 Probability less than .05		Chi Square (3df) = 4.43 Not Significant	

This table indicates that among the small families there was a sex difference which was not significantly present among the large families. Among the mothers of small families, sons were more likely to be expected to attain a doctorate (39 percent) than were daughters (26 percent). When the analyses were conducted separately for large and small families by Catholic and Non-Catholic religion, the sample sizes were reduced so that none of the four analyses were significant at the .05 level although the Small Non-Catholics did show a trend significant at the .10 level. All four analyses had the direction of effect favoring the educational aspirations of the sons.

These analyses then, found two significant effects. Small families had higher aspirations for the education of their sons than did large families. Secondly, among the small families, the mothers' aspirations for their sons' educational attainments were higher than for their daughters'. As can be seen in the above table, the small family sons were expected by their mothers to accomplish significantly more than were the other three groups, large family sons or daughters of either family size.

L. Models Predicting Family Size

In this section of the report some linear models will be used to formalize the findings relating various factors to family size.

Religion and Socio-economic Status - Boston Sample

It is argued here that two major factors have operated to affect the probability of a family having many children rather than a few. These factors are religion and socio-economic status. Catholics of the generation of the parents of the families in this sample, as contrasted with Non-Catholics, were much more likely to feel that they should have a large family if that was what God's will was for them. Thus normally fertile Catholic couples would have five or more children. Infertility or late marriage might reduce the family size for some of these people.

The second cultural factor operating on families of this generation was the social norm that families should have as many children as they could afford. Thus a family that was "well-to-do" could afford many children, and should have them.

This section of the report gives the result of the development of such a model. Not only must the two main effects of religion and wealth be considered but also their interaction, since Catholic families who were also well-to-do would be receiving double pressure for large families yet subfecundity and late marriage would still reduce the percentage of these families having large families to less than 100 percent. For ease of statistical analysis, it is also useful to have a general constant in the model.

The theoretical model is as follows. It is assumed that roughly one-fourth of all couples (in this sample) will have large families. This is the constant effect. In addition to this basic proportion, if the family is Catholic, add another 50 percent. Thus Catholic families should have 25 + 50 or 75 percent with large families. Non-Catholics should have 25 percent large. We then add in an effect for socio-economic status. If a family is "well-to-do" add another 25 percent of families who will be large. The model now would predict that well-to-do Catholic families should have 25 + 50 + 25 = 100 percent large. Well-to-do non-Catholic families should have 25 + 0 + 25 = 50 percent large. Since subfecundity affects somewhere between ten and twenty percent of the population, assume that if a family is both Catholic and well-to-do, we subtract out a subfecundity term of 15 percent.

The model below summarizes the paragraph above. It gives the proportion of the families which will be large depending on the religion and status.

1) $$\Pr(\text{large}) = .25 + .50(\text{Cath}) + .25(\text{WTD}) - .15(\text{WTD})*(\text{Cath}).$$

To understand this model we need the following notational definitions.

Cath = 1 if the mother of the family was Catholic

= 0 otherwise

WTD = 1 if the family was Well-to Do. Four different definitions of "Well-to-Do" were tried. SES-WTD = 1 if the father had an occupation rated "1", Income-WTD = 1 if the family had an annual income of $35,000 or more, Education-WTD = 1 if the father had a Ph.D., M.D., or J.D., and Subjective-WTD = 1 if the mother said that she felt her family was "Well-to-Do" or "Wealthy".

WTD = 0 otherwise

(WTD)*(Cath) = 1 only if both Cath and WTD = 1

= 0 otherwise

Pr(large) = the probability that a family would have five or more children. (When the model was tested for predicting the family size of an individual family this variable was replaced by FAMSIZE which = 1 if the family had five or more children and FAMSIZE = 0 if the family had two children.

Table IV-47 gives the fitted predicted proportions for the four types of families (Catholic and Non-Catholic by Well-to-do or not Well-to-Do) for four alternative indices of WTD. Multiple regression procedures were used to fit the parameters for this table.

Table IV-47

Proportions of Families Predicted to be Large by Model

Definifion of WTD	Proportion of Large Families				
	Catholic		Non-Catholic		
	WTD	Non-WTD	WTD	Non-WTD	R^2
SES-WTD	.88	.74	.68	.24	.247
Income-WTD	.91	.71	.49	.23	.235
Education-WTD	.78	.74	.43	.26	.208
Subjective-WTD	.83	.74	.49	.26	.217
Model (1)	.85	.75	.50	.25	---

These results indicate that there is considerable similarity in the proportions of large families predicted by these models with the various definitions of "Well-to-Do". All four of the coefficients of multiple determination (R^2 values) indicate equations which were significant beyond the .001 level.

What this model says is that, in this sample, about one fourth of the people who were neither Catholic nor Well-to-Do could be expected to have large families. If a family was Catholic the proportion increases to three out of four. If a Family was Well-to-Do but not Catholic about half would have large families while if a family was both well-to-do and Catholic some 85 percent could be expected to have large families.

While this descriptive model is obviously limited by the peculiar nature of this sample, it is still interesting. In this sample, the effect of religion was roughly double the effect of being Well-to-Do. For the Catholic families, the correction factor needed to account for subfecundity reduced the effect of being well-to-do to about half its size among Non-Catholics. Given the sample size studied here, an effect of this size (about 10 percent) would not be significant. Hence we have an explanation for the general failure to reach significance of many of the SES related variables when related to family size among the Catholics.

Linear Models Predicting Family Size - Puerto Rican Sample

In the Puerto Rican data it was possible to use family size (number of children) directly as a dependent variable since the sample was so much larger. Two analyses were conducted, one predicting the family size for all size families, and one where the one-child families were deleted from the analysis. The results indicated that it was somewhat easier to predict family size when the one-child families were deleted. Trying to predict all ten family sizes the R^2 was .11 and when the one-child families were deleted this rose to .13. Thus there was a twenty percent improvement in the power of the equation when these one-child families were removed. It has been argued elsewhere that families in Puerto Rico usually have one child only when there are severe subfecundity problems and that these biological reasons for the one-child families are not related to the sociological factors which help to determine other family sizes.

An examination of the standardized regression weights (beta weights) indicated that the most powerful variable was parental age. The older the parents, the larger the family. While a general increase in family size with age of parents was expected, in this sample where the youngest child was at least in the seventh grade, the magnitude of the age effect was not expected to be so strong.

The second most powerful predictor was the socio-economic status of the family. The lower the SES of the family, the larger the family. Another variable was whether or not Spanish was spoken in the home. The non-Spanish speaking homes (which usually spoke English) tended to be smaller families. Even with socio-economic status in the equation, the wealth related variable of number of communication and transportation devices owned was linked to smaller families.

The larger families tended to be more religious, to have higher overall local integration into the community, to be native Puerto Rican, and to have fewer mothers working. The smaller family in contrast tended to be less religious, to have a working mother, to be recent arrivals in Bayamon, and to have fewer relatives and friends in the community. They were also more likely to have been born outside Puerto Rico.

CHAPTER V FAMILY SIZE AND PARENT-CHILD RELATIONSHIPS

With respect to how a child perceives his parents and the parent-child relations as affected by family size, we expected that the child from a smaller family would see his parents as more accepting and less rejecting. He was also expected to see his parents as exercising greater psychological control over him, while the child from a large family was likely to experience greater autonomy. The large-family child was predicted to perceive his parents as tending toward more firm discipline while the small-family child was expected to be more likely to describe his parents as using lax discipline.

Review of Literature - Bossard and Boll (1956) characterized the small family as exerting parenthood in an intensive way. Each child was given individual attention and care. The child participated in a democratic way in the family process and cooperated with other members. In contrast parenthood in a large family was described as extensive. Emphasis was placed on the group instead of on the individual. Conformity and cooperation were valued above self expression and individualism. The emphasis was not on the utmost development of each child but on duty to the family. Since the group was larger, rules of conduct and procedure were essential. Discipline was necessary for smooth functioning. Children of large families tended to specialize in their family roles.

Ney, Carlson & Garrett (1970) found that the larger the family, the less likely that it be characterized by a predominance of positive affect. Adolescents' perceptions of how their parents felt toward them showed a slight increase in positive affect from one to two children but a steady statistically significant decline becoming accelerated after five children. Looking at the opposite side of the relationship, that is, the affect that children from different size families felt toward their parents, children from two child families reported the greatest degree of affect. The children's affect toward their parents declined slowly as the size of the families increased. Thus, although the children in larger families did not feel that their parents liked them as much, the children themselves did not differ as much in their own affect with increasing family size. Mothers from large and two child families tended to find their maternal role more satisfying than mothers of families of three or four children. Thus the mothers of large families seemed to be more satisfied with family life than their own children were while the mothers of one and two child families shared the same positive feelings with their children.

Regarding discipline and the granting of autonomy, Nye and his associates (1970) found that parents in large families were more restrictive and more likely to employ corporal punishment. This response was given to questions about their children's freedom to attend social events and decide what they would wear. Sex differences were evidenced by a trend for larger families to show less permissiveness toward girls than toward boys with increasing family size. The use of corporal punishment as a way of disciplining children increased from one child families to families of eight or more children. Discussion as a way of solving control problems was also more common in smaller families. In this study no social class effects were found, probably due to the fact that it was a homogeneous middle class sample.

In a study of white Protestant intact urban families, Elder and Bowerman (1963) found that the fathers were the principal decision makers on child-rearing matters and chief disciplinarians with increasing family size except where boys from lower class families were involved. Family size affected paternal involvement most strongly among middle class boys and lower class girls. In lower class families when there were one or more boys in the family, paternal involvement in disciplining girls was very strong. The same effect of strong paternal involvement and use of external methods of punishment occurred in lower class families that had only boys.

PARENT-CHILD RELATIONSHIP BY FAMILY SIZE, RELIGION AND SEX

Suburban Boston Sample

The instrument used in this study to measure parent-child relationships was Schaefer's (1965) Children's Reports of Parental Behavior Inventory (CRPBI). This instrument uses the same items to apply to parents of either sex. The CRPBI consists of 18 scales, each either sixteen or eight items long measuring a variety of aspects of parent-child relationships. Each item reports a parental behavior item which the child then reports as "like" his parent, "somewhat like", or "not like" his parent. These responses were coded 3, 2, and 1 respectively so the scores for a 16-item scale can range from 16 to 48 and an 8-item scale can range from 8 to 24.

The means and standard deviations for the eighteen CRPBI scales as filled out by 575 children in this study are reported in Table V-1. This table gives the mean score on each scale for the mother and for the father and the z-score of the differences of these means.

In terms of these scales, children report that mothers are higher on the scales of Acceptance, Child-Centeredness, Possessiveness, Control, Positive Involvement, Intrusiveness, Control through Guilt, Hostile Control, Acceptance of Individuation, Lax Discipline, Instilling Persistent Anxiety, and Withdrawal of Relationships. Fathers were higher only on Hostile Detachment and Extreme Autonomy. The parents did not significantly differ on Rejection, Enforcement, Inconsistent Discipline and on Nonenforcement.

Table V-1

Means and Standard Deviations on CRPBI Scales for Mothers and Fathers

(N = 575 Children)

Scale	Items[1]	Mothers		Fathers		z-score Difference
		Mean	(SD)	Mean	(SD)	
Acceptance	16	38.37	(7.37)	35.87	(7.84)	5.57**
Child-Centeredness	8	17.22	(3.69)	15.75	(3.79)	6.66**
Possessiveness	8	15.06	(3.15)	13.48	(2.93)	8.81**
Rejection	16	24.19	(6.55)	23.47	(6.04)	1.94
Control	8	15.38	(3.56)	14.31	(3.38)	5.23**
Enforcement	8	13.21	(3.21)	13.15	(3.13)	0.32
Positive Involvement	16	36.73	(6.41)	33.57	(6.70)	8.17**
Intrusiveness	8	14.77	(3.89)	13.09	(3.29)	7.91**
Control through Guilt	8	13.22	(3.93)	12.19	(3.46)	4.72**
Hostile Control	16	27.11	(7.04)	25.35	(6.39)	4.44**
Inconsistent Discipl.	8	12.38	(3.49)	12.24	(3.28)	0.70
Nonenforcement	8	12.84	(3.08)	12.98	(3.17)	-0.76
Acceptance of Individuation	16	38.29	(6.58)	36.43	(6.79)	4.72**
Lax Discipline	8	13.98	(3.31)	13.24	(3.06)	3.94**
Instilling Persistent Anxiety	8	12.42	(3.97)	11.60	(3.52)	3.71**
Hostile Detachment	16	23.21	(6.04)	24.14	(6.37)	-2.54*
Withdrawal of Relationship	8	12.72	(4.19)	11.67	(3.54)	4.59**
Extreme Autonomy	8	14.11	(3.72)	14.54	(3.66)	-1.98*

1. 8-item scales can score from 8 to 24, 16-item scales from 16 tc 48.

* Significant at the .05 level or beyond

** Significant at the .01 level or beyond

Schaefer (1965) factor analyzed the CRPBI and obtained three orthogonal factors which he named Acceptance versus Rejection, Psychological Autonomy versus Psychological Control, and Firm Control versus Lax Control. These factors were replicable for both boys and girls and with respect to mothers and to fathers. This three factor structure has been replicated cross-culturally by Renson, Schaefer, and Levy (1968) in a French version and by Nuttall and Nuttall (1968) in a Spanish version. Schludermann and Schludermann (1970) tested the replicability of the three factor solution in several samples in Canada. Garvey (1972) reanalyzed the Nuttall and Nuttall data using an oblique rotation and while replicating the general three factor solution also found evidence for a fourth factor which he called Demandingness.

In this study the factor analyses were conducted separately for the 18 CRPBI scales referring to the mother and for the 18 scales referring to the father but with a total of 575 children of both sexes and of small and large family sizes. There were thus two factor structures obtained, one for mothers and one for fathers. An iterated principal factor solution with SMC values on the principal diagonal was obtained. The eigenvalues were examined and those factors with eigenvalues greater than 1.0 were rotated to an oblique direct oblimin solution with Kaiser normalization.

For both the mothers' and the fathers' analysis three, not four factors appeared. For the fathers, the three factors accounted for 70.3 percent of the total variance while for the mothers the three factors accounted for 71.2 percent. The existence of a three factor solution was clear, with the third eigenvalue 2.6 and the fourth eigenvalue 0.8 for the mothers and 2.3 and 0.8 respectively for the fathers. Hence there was a jump of about 1.5 or more between the third and fourth eigenvalues.

The factor pattern loadings for the direct oblimin solution with Kaiser normalization are given for both the mothers and the fathers in Table V-2. The solutions are very similar, in fact the Burt Coefficients of Congruence (Harman, 1967, p.270) were .996, .997, and .995 for the mothers and fathers HPC, ACC, and LAX factors respectively. These three factors were also very congruent to those found by Schludermann and Schludermann(1970). To compare the present factor structure to that ofthe Schludermanns, their tables 2, 3 and 4 where they report the loadings for varimax factors by sex of respondent and by two groups for mother and father were averaged using the r to z transformation to obtain one average factor loading matrix for mothers and one for fathers for the three factors. These average loading matrices were compared with the present study's direct oblimin factor pattern. The Burt's Coefficients of Congruence were calculated. The minimal comparable coefficient was .916 and the mean of the comparable coefficients was .959.

A comparison was also made with the results of Garvey's Table 10 (1972). He had found a fourth factor, Demandingness and collapsed across sex of child and sex of parent for his summary in Table 10. The Burt's Coefficients for the comparable three factors were all larger than .91 and the mean was .936. The fourth factor, Demandingness was most related to the present study Hostile Psychological Control factor with coefficients of .784 and .819 for mothers' and fathers' patterns respectively.

From this it was concluded that in this sample the CRPBI clearly had a three factor structure which was very similar to that found previously. These factors were labeled: Hostile Psychological Control, Acceptance, and Lax Discipline vs. Firm Control.

Table V-2

Direct Oblimin Factor Patterns for Mothers and Fathers CRPBI

Scale	Mothers			Fathers		
	HPC	ACC	LAX	HPC	ACC	LAX
Acceptance	-19	(86)	03	-11	(91)	03
Child-Centeredness	14	(83)	09	18	(88)	05
Possessiveness	(62)	42	-02	(68)	37	-01
Rejection	(67)	-50	15	(62)	-51	17
Control	(65)	09	-47	(62)	06	-45
Enforcement	(57)	-15	-41	(50)	-12	-46
Positive Involvement	03	(87)	03	09	(88)	03
Intrusiveness	(72)	16	-14	(71)	18	-17
Control thru Guilt	(78)	-05	03	(74)	-09	05
Hostile Control	(82)	-22	-11	(78)	-28	-12
Inconsistent Discipline	(53)	-17	41	(51)	-16	37
Nonenforcement	04	01	(82)	02	-07	(76)
Acceptance of Individuation	-30	(68)	17	-24	(75)	18
Lax Discipline	13	21	(79)	10	21	(78)
Instilling Persistent Anxiety	(75)	-20	04	(77)	-16	-07
Hostile Detachment	48	(-61)	20	38	(-67)	23
Withdrawal of Relationship	(63)	-23	15	(59)	-28	18
Extreme Autonomy	-21	-01	(64)	-18	-01	(64)

Note - All decimal points are eliminated, those variables indicated by brackets (xx) were used in scoring that factor.

HPC is Hostile Psychological Control, ACC is Acceptance, and LAX is Lax Discipline vs Firm Control.

Hostile Psychological Control (HPC) was composed of the scales of Possessiveness, Rejection, Control, Enforcement, Intrusiveness, Control through Guilt, Hostile Control, Inconsistent Discipline, Instilling Persistent Anxiety and Withdrawal of Relationship. The scale of Hostile Detachment had a medium sized loading on this factor also.

Acceptance (ACC) included the scales of Acceptance, Child-Centeredness, Positive Involvement, Acceptance of Individuation and the negative of Hostile Detachment.

Lax Discipline vs Firm Control (LAX) was composed of the scales of Nonenforcement, Lax Discipline and Extreme Autonomy.

For subsequent use of these factors, the factor scores were generated by averaging the z-scored scales indicated above and by brackets in the factor pattern table. This procedure is equivalent to weighting each scale entering into the factor equally rather than using the greater detail of the factor pattern loadings. Finally each average factor score was transformed to a T-scale form with a mean of 50 and a standard deviation of 10.

The intercorrelations among these factors are presented in Table V-3. Above the major diagonal are the empirically observed correlations among the factor scores while below the major diagonal are two three-element triangular matrices of the cosines of the angles of the oblimin factors and a square matrix of the Burts coefficients of factor similarity between the mothers' and the fathers' factor patterns.

Table V-3

Intercorrelations Among CRPBI Factor Scores and Among Factors

	Mothers			Fathers		
CRPBI Factors	HPC	ACC	LAX	HPC	ACC	Lax
Mothers HPC		-.50	-.16	.57	-.25	-.09
Mothers ACC	-.25		.12	-.27	.51	.03
Mothers LAX	-.08	-.01		.06	-.11	.63
Fathers HPC	.996	.178	-.068		-.44	-.17
Fathers ACC	.273	.997	-.020	-.24		.001
Fathers LAX	-.090	-.027	.995	-.12	-.09	

Note - 1. The triangle of correlations above and to the right of the major diagonal are observed correlations among the factor scores.

2. The two three-element triangles of coefficients below the major diagonal are the cosines of the angles of the direct oblimin factors.

3. The square nine-element matrix of coefficients in the lower left are Burts Coefficients of Congruence relating the fathers and the mothers factor solutions.

This table indicates that the factor scores were considerably more interrelated than were the oblimin factors. For example the observed correlation between mothers Acceptance and mothers Hostile Psychological Control was -.50 while the cosine of the angle between these two factors was only -.25.

On the other hand the intercorrelations between mothers' and fathers' factor scores for corresponding factors were not as high as the similarity of their factor pattern loadings, as indicated by the Burt's Coefficients. For example the observed correlation between mothers HPC and fathers HPC was .57 while the Burt's coefficient for these two factors was .996.

To test the effects of Family Size, Sex of Child, and Religion of the Family on the parent-child relationships a three-way multivariate analysis of covariance was run. The three factors were:

1. Family Size - dichotomized into Small (2-child) and Large (5 or more)
2. Sex of Child - Male and Female
3. Religion of Family - Catholic or Non-Catholic.

The covariates were the Mother's Education, the Father's Education, the Family Income, and the Occupational Status of the Father's Occupation.

There were six dependent variables, the three mothers' CRPBI factors and the three fathers' CRPBI factors. These factors were scored with a mean of 50 and a standard deviation of 10. Note that this equalizes the factor scores for mothers and for fathers even though in raw score terms the mothers averaged higher on both Acceptance and on Hostile Psychological Control than did the fathers.

All three main effect were significant, as were the covariates. The covariates, while significantly (.002 level) associated with the six dependent variables, did not remove very much of the variance of the CRPBI factors. In terms of R^2 the four covariates accounted for about one percent of Mother's Hostile Psychological Control and Mother's Lax Discipline, about two percent of Mother's Acceptance, Father's Hostile Pschological Control and four percent of Father's Acceptance. Father's Lax Discipline was not significantly associated with covariates. The most powerfully affected factor, that of Father's Acceptance, was associated with Father's Education and Family Income such that the higher the education and income, the higher the father's Acceptance.

FAMILY SIZE

The main effect for family size was significant at the .027 level, however the univariate Fs indicated that only one of the six factors was significantly associated with family size. This was Father's Acceptance. The mean for Father's Acceptance for the small families was 51.23 while the mean for the large families was 48.96. Thus, controlling on socioeconomic status, the smaller families had fathers who were more Acceptant of their children. This effect was significant at the .0015 level.

SEX OF CHILD

The main effect for sex of child was highly significant at the .0002 level. Five of the six factors were significantly different for boys than for girls. These are presented in Table V-4.

Table V-4

Covaried CRPBI Factors by Sex of Child

CRPBI FACTOR	Males	Females	Univariate F	P less than
Mothers Hostile Psych. Control	50.90	49.29	4.66	0.031
Mothers Acceptance	48.95	50.74	4.68	0.031
Mothers Lax Discipline	51.08	49.17	6.29	0.013
Fathers Hostile Psych. Control	51.73	48.68	15.52	0.000
Fathers Acceptance	48.84	50.96	6.81	0.009
Fathers Lax Discipline	49.80	50.13	0.08	0.781

Note univariate degrees of freedon are 1 and 556.

These data indicate that boys see their mothers as tending to use greater Hostile Psychological Control, less Acceptance, and yet more Lax Discipline than did the girls. The picture was similar for fathers. Boys saw their fathers as giving them less Acceptance and more Hostile Psychological Control than did the girls. The only factors where boys and girls did not see their parents differently was for fathers' Lax Discipline.

RELIGION OF FAMILY

The main effect for family religion was significant at the .02 level yet only one of the six CRPBI factors differed between the two religious groups. Catholic fathers tended to be seen by their children as being Firmer Disciplinarians while the Non-Catholic fathers were seen as more Lax Disciplinarians. The means for the Lax Discipline factor were 51.41 for the Non-Catholic fathers and 48.60 for the Catholic fathers. This difference had a univariate significance at the .001 level.

TWO-WAY INTERACTIONS

None of the three two-way interactions were significant beyond the .05 level. However the Family Size by Religion interaction did have a non-significant trend at the .08 level. The major univariate trend in this interaction was with the fathers Acceptance factor.

The triple interaction of Family Size by Sex of Child by Religion of family was not significant but did have a non-significant trend. The p level was 0.12. One of the univariate F-tests was significant, that for Fathers' Hostile Psychological Control, p level of .016.

SUMMARY

This analysis has shown that the CRPBI instrument in this sample factor analyzes into three factors. These factors are essentially identical for mothers and for fathers and are essentially the same factors which have been found in previous factor analyses of the CRPBI in the U.S., Canada, and in Belgium. However the four factor structure found by Garvey in Nuttall and Nuttall's Puerto Rican sample was not found in this Suburban Boston sample. These factors have been called Hostile Psychological Control, Acceptance, and Lax vs. Firm Discipline.

An analysis of the individual scales indicates that most of the scales relating to Hostile Psychological Control and to Acceptance were higher for mothers than for fathers. Thus children in this sample tended to see their mothers both as more Accepting and as more Controlling than they saw their fathers.

The empirical correlations between the factor scores indicated a substantial negative correlation between Acceptance and Hostile Psychological Control (-.50 for mothers, -.44 for fathers). In the factor structure this negative intercorrelation was less (-.25 and -.24). The intercorrelations between mother's and father's factor scores were .57 for HPC, .51 for ACC, and .63 for LAX.

In a multivariate analysis of variance it was found that all three main effects of Family Size, Sex of Child, and Religion were significant but none of the interactions were. For family size, only Fathers Acceptance differed significantly, with the small family fathers being more acceptant of their children. Sex of child had a powerful effect with all three of the mothers factors and two of the father's factors. The girl tended to see her mother as more Accepting, less Controlling, and yet giving her more Firm Discipline than was seen by the male child. Similarly, the daughter saw her father as more Accepting and less Controlling than did the son. Fathers Discipline was not seen as differing by the sex of the child.

The religion of the family was significant in its effect on the parent-child relationships, but only on the factor of Fathers Lax Discipline. As might be expected, Catholic fathers were seen by their children as more Firm in their Discipline while the Non-Catholic fathers were more Lax in their Discipline.

In all of these multivariate analyses of variance the effects of four socio-economic status measures were covaried out. These covariates had a significant effect on the Acceptance of both parents and on the Hostile Psychological Control of the father. The general trend was for better educated and higher income parents to be seen by their children as more Acceptant.

PARENT-CHILD RELATIONSHIPS

Puerto Rican Sample

The relationships between parents and children in the various sizes of families were measured with a Spanish translated and adapted version of Schaefer's (1965) Children's Report of Parental Behavior Inventory (CRPBI). Data on how this instrument worked in its translated form is given in Nuttall *et al*. (1968), Nuttall, Smith and Nuttall (1970) and Garvey (1972). A factor analysis done on the Mother scales and again on the Father scales of the CRPBI reproduced very closely the three factors which Schaefer originally had found: Acceptance vs. Rejection; Psychological Control vs. Autonomy; and Firm Discipline vs. Lax Discipline. These three factors collectively accounted for 74 percent of the total variance in both factor analyses done on the Bayamon Data.

The first factor of the CRPBI was termed Acceptance being composed of scales of: Acceptance, Child-Centeredness, Possessiveness, Positive Involvement, Intrusiveness, and Acceptance of Individuation. A second factor, Hostile Psychological Control, was composed of the scales of Control through Guilt, Hostile Control, Control through instilling Persistent Anxiety, Control through Withdrawal of Relationship, Rejection, Hostile Detachment, Inconsistent Discipline, Control, and Enforcement. The third factor, Lax Discipline was composed of the scales of Extreme Autonomy, Nonenforcement, and Lax Discipline.

Factor scores were constructed for each student on the foregoing three factors by taking the mean of an individual's scale scores on each of the scales composing a given factor. Each scale entered into one and only one factor score. Thus there were six factors for each student, three describing his mother's behavior and three describing his father's.

The effect of different sized families was examined with these six factor scores as dependent variables for: (1) boys and girls in the total population (2) boys and girls with the father living at home and (3) junior and senior high school boys and girls with fathers living at home.

In these analyses junior high school included grades 7 to 9 and senior high school included grades 10 through 12.

The findings of the total population for any of the father's CRPBI factors were hard to interpret. The children's perceptions of the fathers that were present in the home and those that were not present were being analyzed together. However because it is hard for children to describe father-child interaction when the father is not present in the home a substantial amount of the time, it was decided that only children with fathers' present in the home would be used in the analysis. All non-significant results are indicated in Table V-5.

The CRPBI results for mother's factors for the total population are presented in Table V-6. For both boys and girls there was a signigicant effect of family size on mother's Acceptance and for girls there was a significant family size effect on mother's Hostile Psychological Control. For both boys and girls the tendency was for Acceptance to decrease with family size with the exception that for girls the two-child rather than the one-child family had the highest levels of mother's Acceptance (see Figure V-1).

Table V-5

Comparisons Yielding No Differences Between Members of Varying Size Families

Population	Group	Variables
Total Population		
N = 1487	Boys	Mothers' Psychological Control
		Mothers' Lax Discipline
N = 2395	Girls	Mothers' Lax Discipline
Father in Home		
N = 1260	Boys	Fathers' Psychological Control
		Fathers' Lax Discipline
		Mothers' Psychological Control
		Mothers' Lax Discipline
N = 1869	Girls	Fathers' Lax Discipline
		Mothers' Lax Discipline
Father Not in Home		
N = 251	Boys	Mothers' Acceptance Factor
		Mothers' Psychological Control
		Mothers' Lax Discipline
N = 340	Girls	Mothers' Acceptance Factor
		Mothers' Psychological Control
		Mothers' Lax Discipline

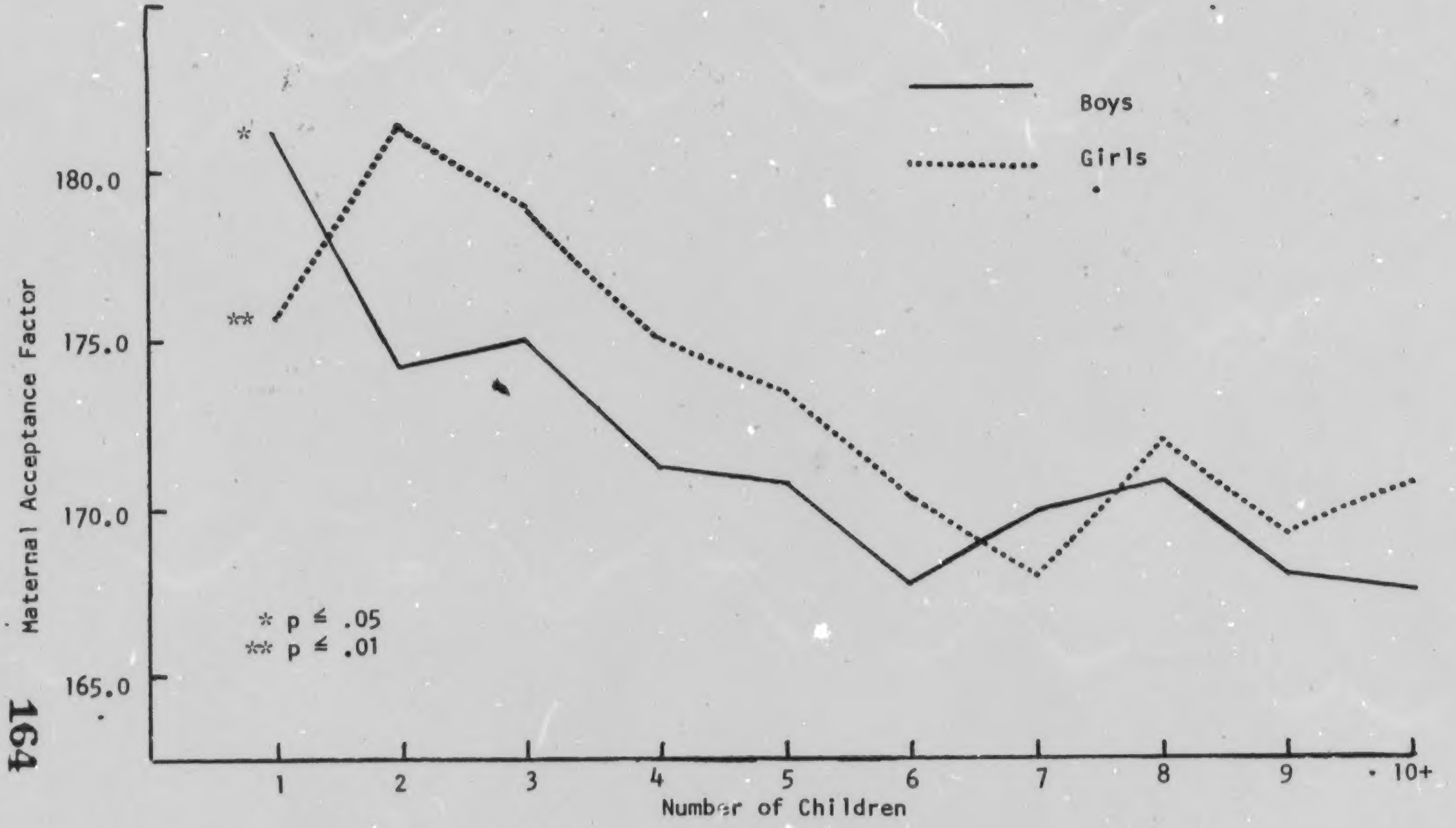

Figure V-1 Relationship of Maternal Acceptance Factor to Family Size

Table V-6

Significant CRPBI Factors for Total Population by Sex

Sex	Factor	General Trend With Increasing Family Size	Eta^2	Trend Line Pt of Change 1st	2nd	3rd	4th	Appropriate placement of one-child families	F	df	P
Boys	Mother Acceptance	Down	.016	3	7	9			3.053	9/1730	.05
Girls	Mother Acceptance	Down	.026	2	5	9		3 & 4	7.902	9/2697	.01
	Mother Psychological Control	Up	.012	3	5	7	9	2 & 3 or 3 & 4	3.299	9/2517	.05

For all boys in the sample, the mother Acceptance factor was significantly related to family size. For the boys the one-child family yielded the greatest degree of mother's Acceptance while the eight-child family had the least.

Among the girls in the total sample, mother's Acceptance also dropped significantly with increasing family size. The best family size for girls was the two-child family with the one-child family more similar to a three or four-child family in terms of her mother's Acceptance.

As indicated in Figure V-1, for family sizes greater than six or seven children, maternal Acceptance seemed to rise again. This rise was, however, not significantly higher than the Acceptance for the six or seven-child families.

For girls, the mother's perceived Psychological Control tended to increase significantly with family size (see Figure V-2 and Table V-6). The trend was not strictly linear with the lowest level of perceived paternal control being found with the three-child families.

Findings for Population with Father Present in the Home

For boys, in families with the father present in the home, both father's and mother's Acceptance significantly decreased with family size (see Figure V-3). The major differences were between small families (sizes one to three children) and large families (with seven or more children). The large families seemed to Accept their children much less than did the small families. As before, the one-child girls were less Accepted by their fathers than were two-child family girls. On the other hand, for sons the one-child boys were somewhat more Accepted than were the two-child family boys.

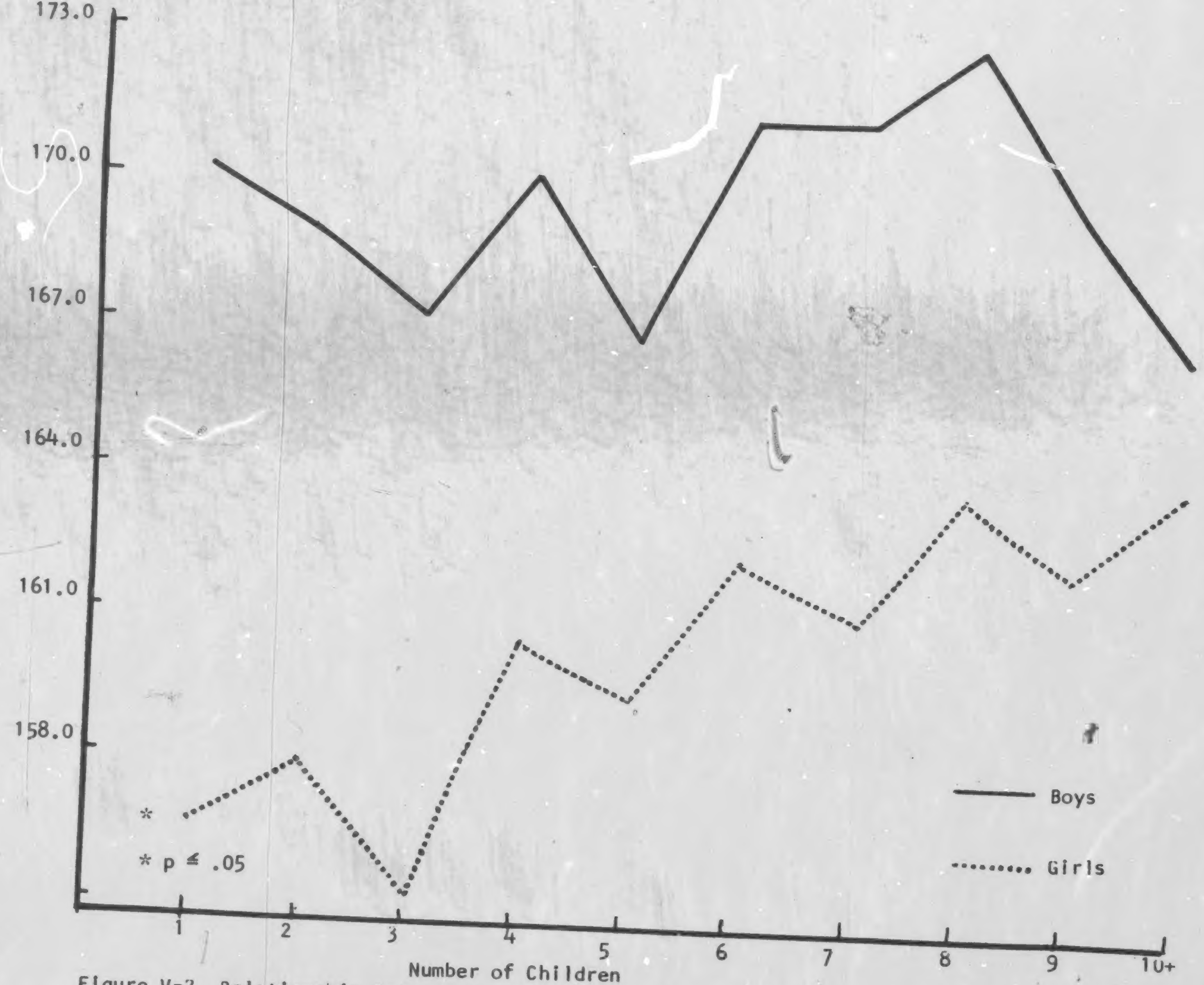

Figure V-2 Relationship Between Perceived Maternal Psychological Control and Family Size

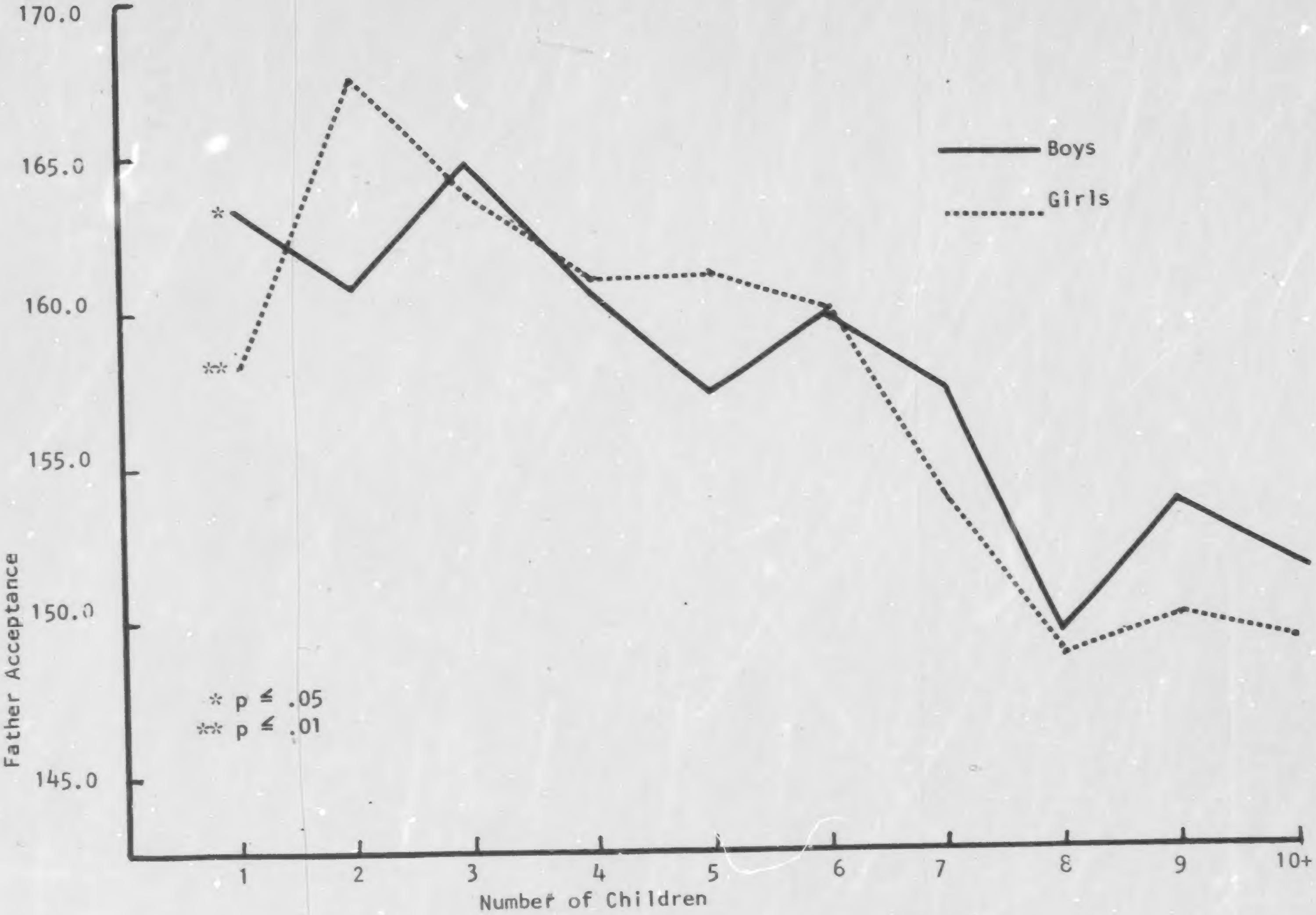

Figure V-3 Relationship Between Father's Acceptance (Father Present) and Size of Family

For girls, not only were both father's and mother's Acceptance related to family size but both parents' Psychological Control tended to increase significantly with family size (see Figure V-3 and Table V-7). In general boys perceived significantly higher Psychological Control from their fathers than did girls, but the trend with increased family size did not reach significance. For girls, the three-child families yielded the lowest levels of father's Psychological Control. For both boys and girls, the Psychological Control of fathers of one-child families was relatively elevated even though not as high as for the children of the largest family sizes.

Parent-Child Relations When Socio-Economic Status is Controlled

The analysis of the characteristics of families with many or few children revealed that socio-economic status (SES) was highly related to family size for several indices of SES. In general the maximum SES was reached in this Bayamon sample for the two-child families with the one-child families being more similar to four and five-child families in terms of their socio-economic status. Since it is well known that there are differences in parent-child relationships in families of different socio-economic status it was felt necessary to examine the impact of family size on parent-child relationships while controlling for socio-economic status.

Table V-7

Signficant CRPBI Factors for Homes with Father Present, by Sex

Sex	Factor	General Trend with Increasing Family Size	Eta^2	Trend line pt of change				Appropriate placement of one-child families	F	df	P
				1st	2nd	3rd	4th				
Boys	Father Acceptance	Down	.025	3	6	9		1	3.035	9/1087	.05
	Mother Acceptance	Down	.020	3	7			1	2.842	9/1252	.05
Girls	Father Acceptance	Down	.041	2	5	9		6 & 7	8.847	9/1856	.01
	Mother Acceptance	Down	.024	2	5	8		3 & 4	5.859	9/2034	.01
	Father Psych. Control	Up	.018	2	4	9		6 & 7	3.541	9/1747	.05
	Mother Psych. Control	Up	.018	3	5	7	9	1	3.858	9/1903	.05

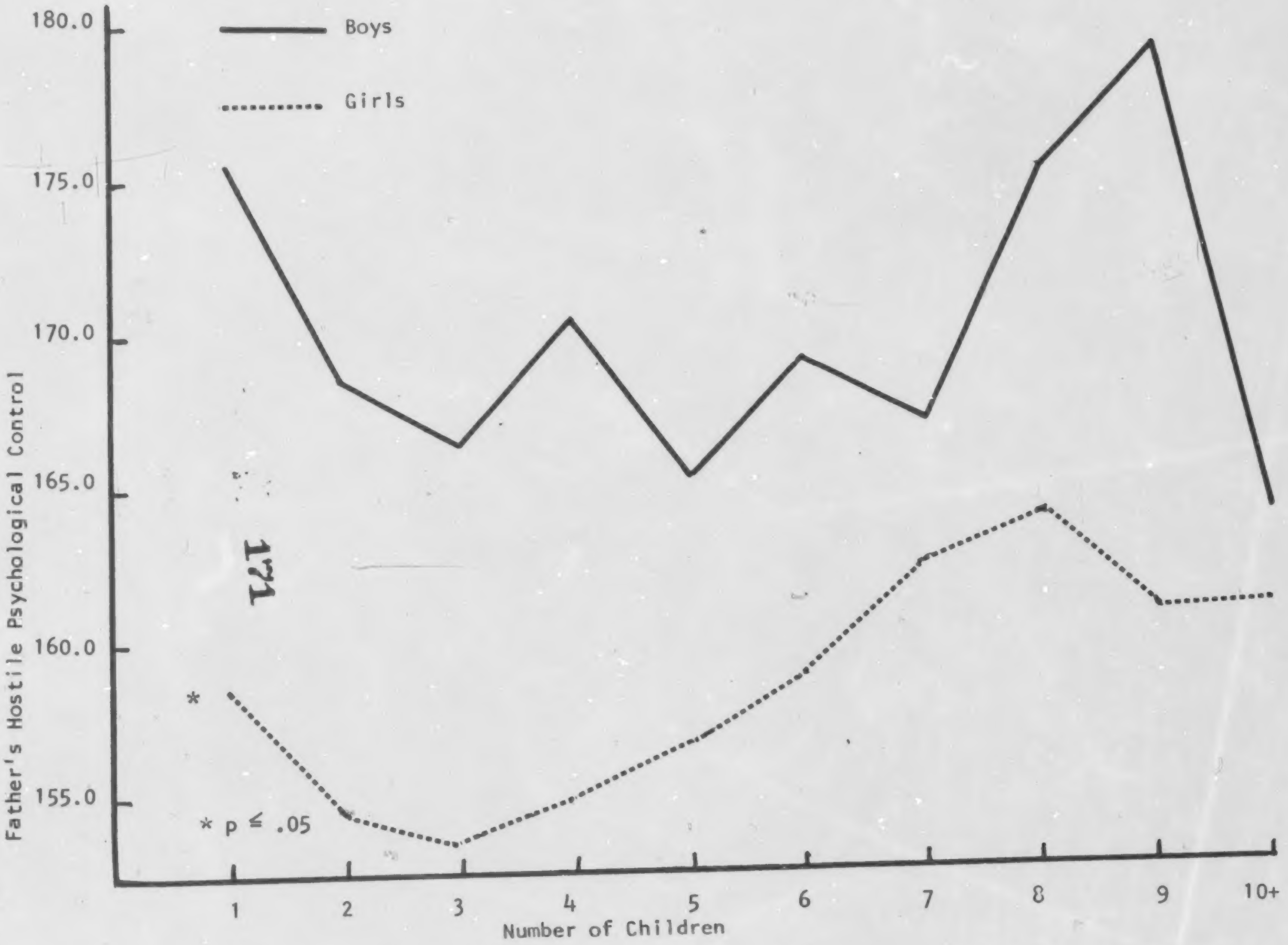

Figure V-4 Relationship Between Father's Hostile Psychological Control (Father Present) and Number of Children in Family

In the present section several multivariate analyses of covariance are reported where family SES was covaried out. Since the father-child variables were not meaningful for those families with a father absent, the father present in the home variable was also covaried out. This section then reports the results where both family SES and father presence in the home are covariates. The dependent variables are the six CRPBI parent-child factors, three for each parent. The single independent variable is family size, with ten levels.

Total Population

To examine the "Big Picture" and to get as many degrees of freedom as possible boys and girls of all grade levels were combined into one sample. The multivariate analysis of covariance indicated that the Father Acceptance and Father Lax Discipline were significantly different for the different sized families (p = .001 and .017 respectively). Mother Acceptance was also significantly affected by family size (p = .001). These results are graphed in Figures V-5, V-6, and V-7 respectively.

As can be seen from Figure V-5, Father Acceptance tended to decline with increased family size. Even after covarying out SES and Father in the Home, it was the two and three-child families which had the highest Father Acceptance. With more than six children in the family a sudden drop

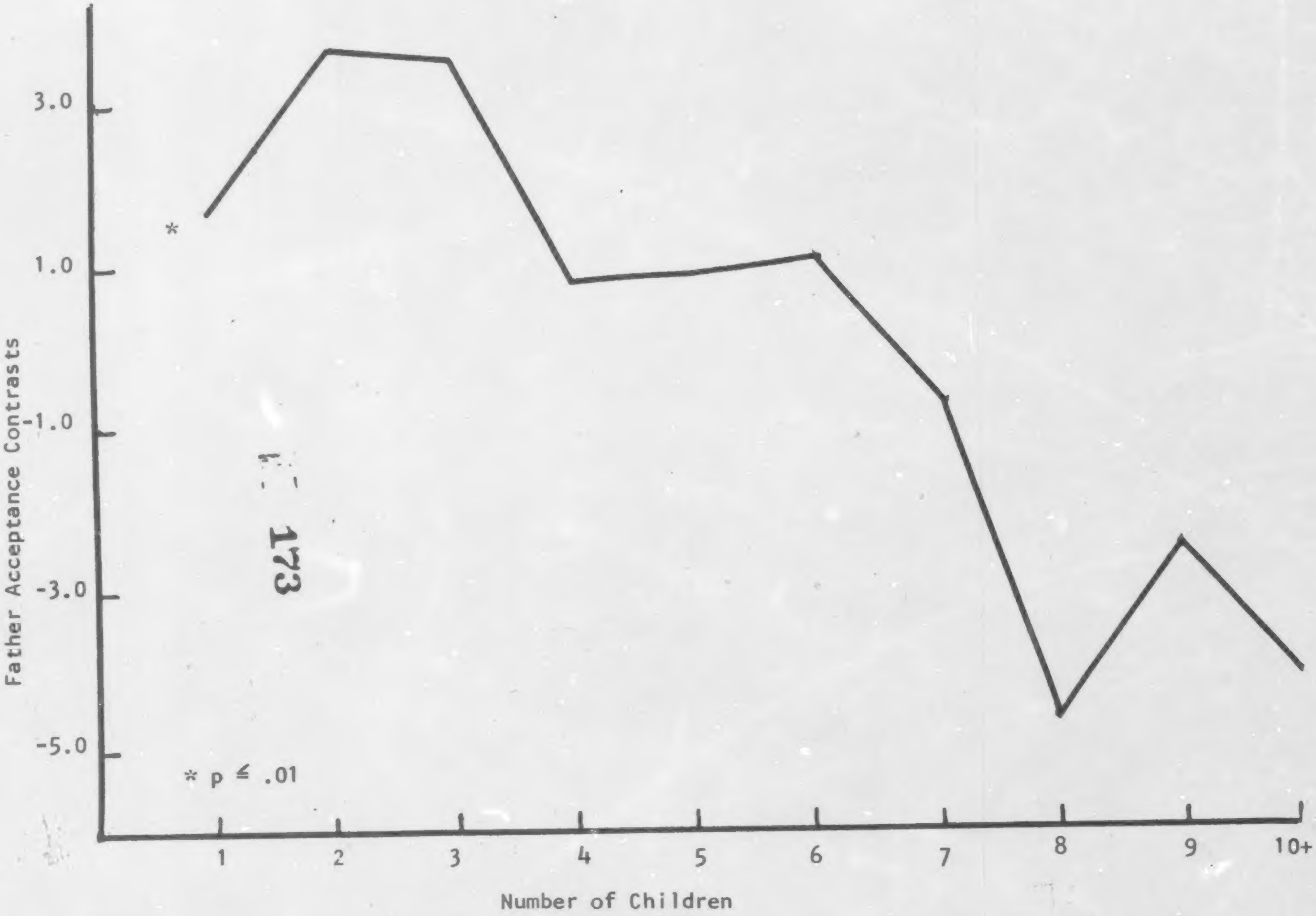

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Figure V-5 Father Acceptance, Covarying SES and Father in Home, and Size of Family

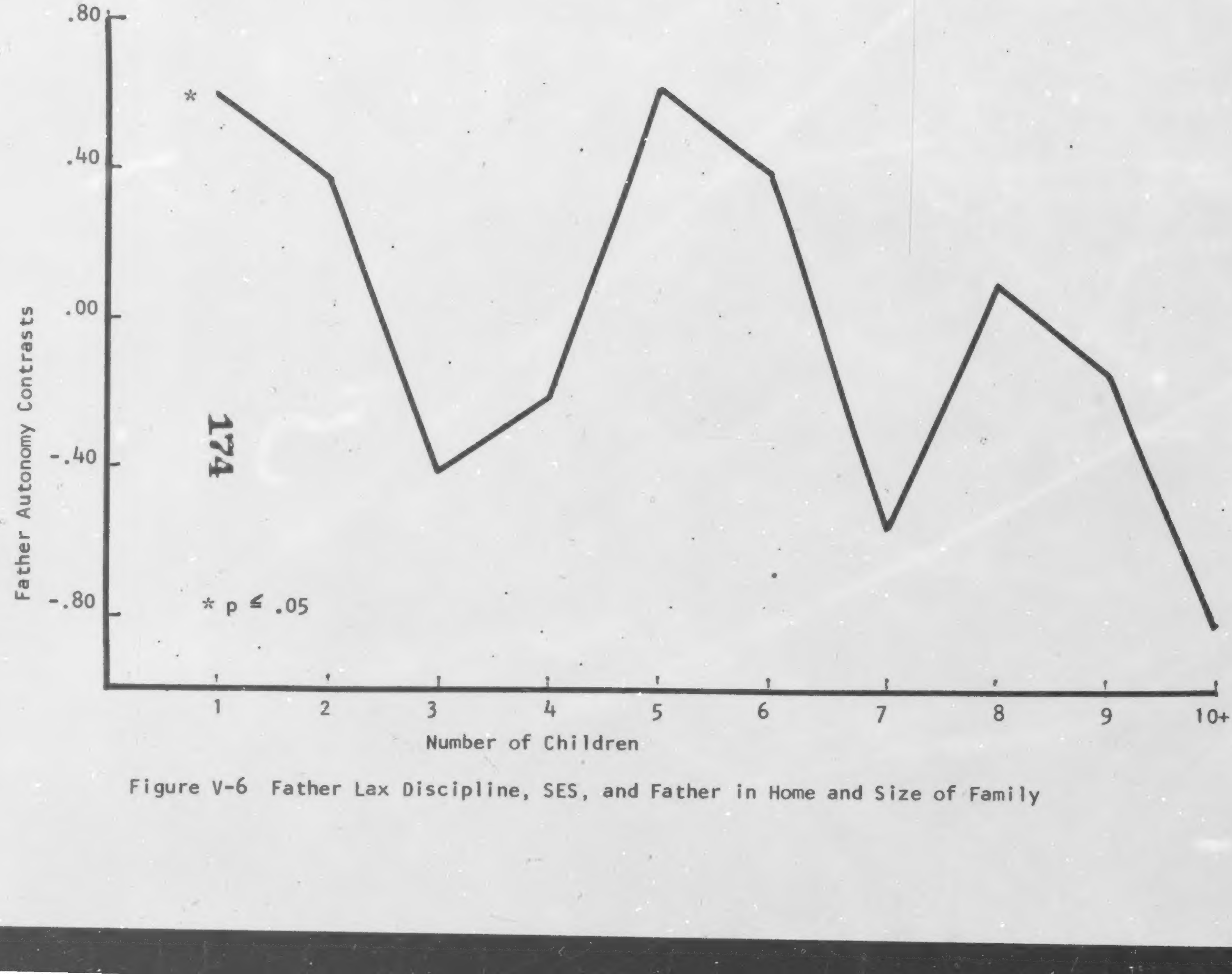

Figure V-6 Father Lax Discipline, SES, and Father in Home and Size of Family

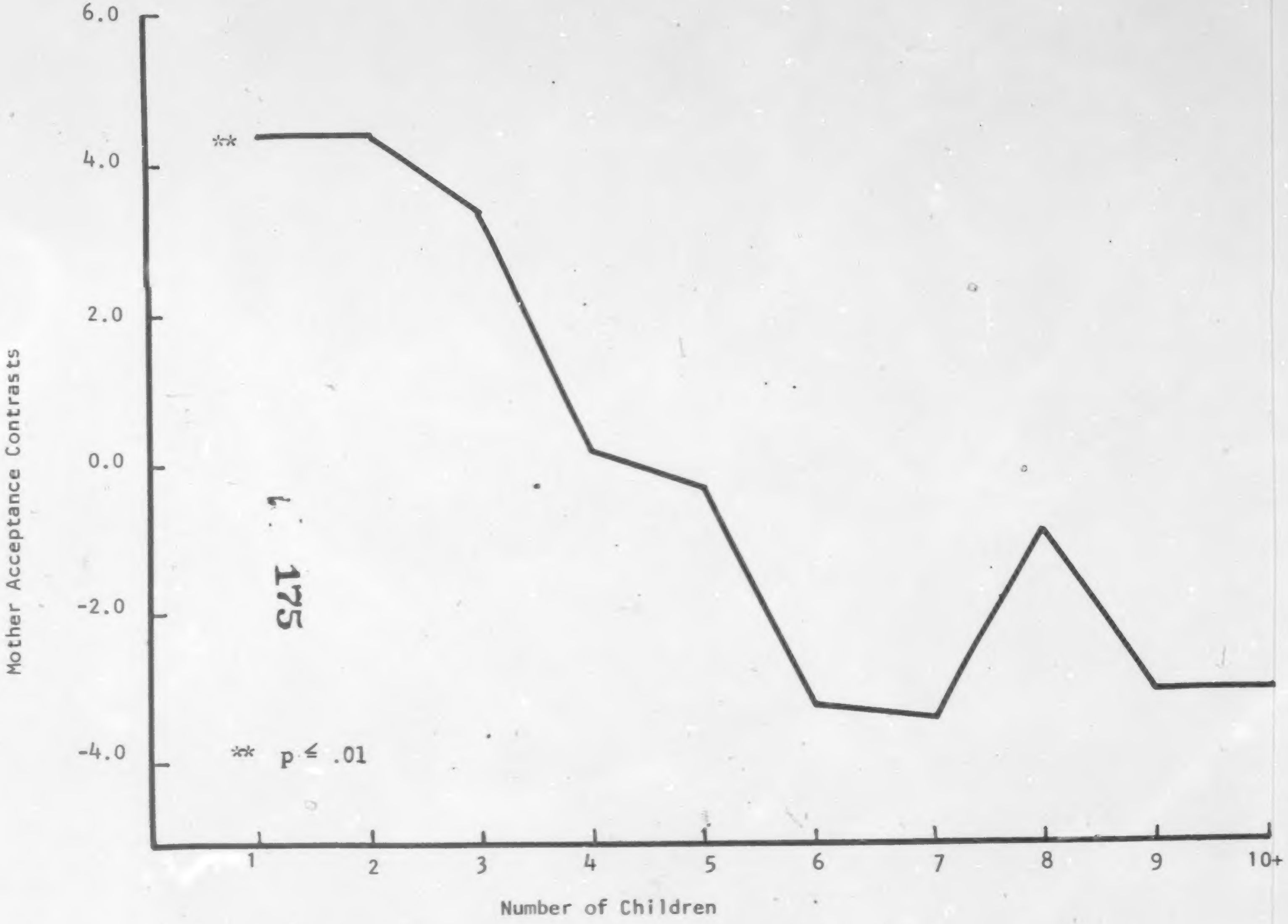

Figure V-7 Mother Acceptance Covarying SES (Father in Home) and Size of Family

was registered in the amount of parental Acceptance perceived by the child. It may well be that with seven or more children the financial aspects of the large family come into play more strongly forcing the father to work more and preventing himself from spending more time with the children. This figure indicates a relatively sharp threshold for Father Acceptance after the six-child family

The results for Father Lax Discipline are presented in Figure V-6. These results, while significant, were much less regular and understandable than those for Father Acceptance. The general trend was for fathers of larger families (after covarying SES and Father presence) to be more firm disciplinarians as the family size increased. However, as the Figure indicates, this trend, is very lumpy. As family size increased from one to three children fathers used considerably more Firm Discipline. However as family size increased to four and five children, the use of Lax Discipline tended to increase again. After the five-child family the amount of Lax Discipline used by the father again fell with a temporary rise at the eight-child family. On the whole these results were difficult to understand and may in fact be related to such outside factors as the relative proportion of boys and girls responding at each family size, since there was a major sex difference in the father's use of Lax Discipline with their children. Fathers in this sample used More Lax Discipline with their sons than with their daughters.

The overall effect of family size (after covarying SES and father's presence) on Mother Acceptance was significant and is presented in Figure V-7. As with Father Acceptance the general trend was for considerably less Acceptance of the child from the mother as the family size increased.

For the mothers, the one child family yielded the greatest Acceptance and the decline was relatively smooth from the two-child family to the six-child family. There was little difference in maternal Acceptance for family sizes above six children.

A discriminant function analysis for this total population based on the multivariate analysis of covariance was conducted. The results are presented in Table V-8 and in Figure V-8. Two discriminant function roots were significant beyond the .01 level and these are plotted in Figure V-8 against family size. The first discriminant function was heavily weighted by Mother Acceptance having a standardized discriminant function coefficient of .07. The plot of family sizes in the Figure V-7 indicates that this first discriminant function was strongly related to family size. The larger the family, the higher this function, indicating the less Maternal Acceptance .

The second discriminant function seemed to contrast Father Acceptance (+.76) and Mother Acceptance (-.81)in its discriminant function coefficients. What this function seemed to be catching was when the father still tended to accept the child, but the mother did not. From Figure V-8 it can be seen that this function increased steadily to the six-child family and then dropped precipitously. This would mean that as the family size increased up to six children the father tended to Accept the children much more than did the mother. However when family size was above seven children, neither parent Accepted the additional children as much as did parents of fewer children. This second function perhaps indicated an interparental difference in desire for children, with the father wanting more children up to a family size of six, while the mother's desire for additional children dropped steadily with each child born.

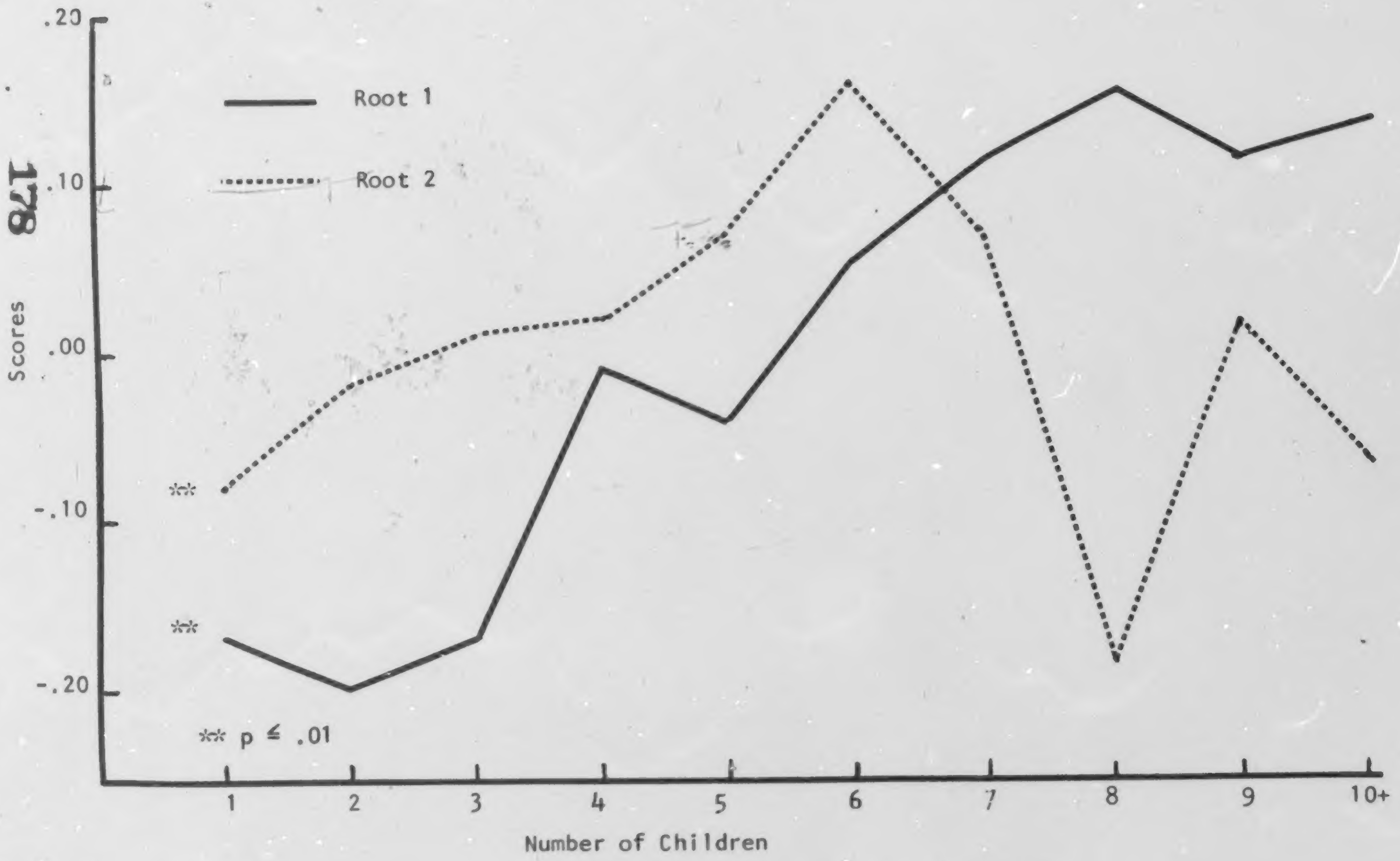

Figure V-8 Discriminant Scores of CRPBI Factors on Total Population Covarying SES and Father in Home

Table V-8

CRPBI Discriminant Function Analysis Based on Multivariate Analysis of Covariance - Covarying SES and Father Presence for Total Sample

Tests of Significance using Wilks Lambda Criterion and Canonical Correlations

Test of Roots	F	Df Hyp.	Df Error	P less than	R
1 through 6	2.455	54.000	25163.152	0.001	0.117
2 through 6	1.615	40.000	24285.406	0.008	0.076
3 through 6	1.288	28.000	23152.961	0.137	0.064
4 through 6	0.863	18.000	21678.461	0.608	0.043
5 through 6	0.679	10.000	19748.000	0.752	0.035
6 through 6	0.179	4.000	17223.875	0.951	0.012

Univariate F Tests

Variable	F(9,4939)	Mean Sq	P less than	Standardized Discriminant Function 1	2	3
Father's Rejection	1.838	821.111	0.056	0.219	-0.296	0.375
Father's Acceptance	5.086	3515.333	0.001	-0.384	0.762	-0.164
Father's Lax Discipline	2.260	123.347	0.016	-0.288	0.339	0.888
Mother's Rejection	1.496	908.889	0.142	0.033	0.048	0.034
Mother's Acceptance	6.338	3812.111	0.001	-0.703	-0.811	0.102
Mother's Lax Discipline	0.817	57.097	0.601	0.220	-0.239	-0.080

Discriminant Score Contrasts

	1	2	3
One-Child Family	-0.167	-0.082	0.075
Two-Child Family	-0.195	-0.020	0.037
Three-Child Family	-0.168	0.009	-0.089
Four-Child Family	-0.011	0.014	-0.038
Five-Child Family	-0.039	0.072	0.050
Six-Child Family	0.059	0.158	0.031
Seven-Child Family	0.118	0.072	-0.065
Eight-Child Family	0.154	-0.177	0.103
Nine-Child Family	0.118	0.017	-0.006
Ten or More Child Family	0.131	-0.063	

Parent Child Relations by Sex and School Level

To examine in greater detail the parent-child relationships the sample was divided into four groups, by sex and by school level. Thus separate multivariate analyses of covariance were done for High School Boys, High School Girls, Junior High Boys, and Junior High Girls. In each case the socio-economic status of the family and the extent to which the father was present in the home were covaried. The independent variable was family size and the dependent variables were the three Father CRPBI factors and the three Mother CRPBI factors.

CRPBI Factors for High School Boys.

The results for the high school boys are given in Table V-9. Only one root approached significance at the .04 level. While this lack of significance precludes great weight being put on this single discriminant function it may be useful to note that the univariate tests indicate that it was the Hostile Psychological Control factors of both the Father and the Mother which were most related to family size.

CRPBI Factors for High School Girls.

Table V-10 presents the results of the multivariate analysis of covariance for High School Girls. Here one root was significant beyond the .002 level. The univariate results and the weights of the standardized discriminant function indicated that both Father's and Mother's Acceptance factors were quite important.

For this discriminant score contrast the one-child family was at the top with the eight-child and the ten or more child family at the lowest end of the discriminant score contrast. Unlike the results before SES was covaried out, the one-child girl was more accepted than were the two-child girls.

Table V-9

CRPBI Discriminant Function Analysis Based on Multivariate Analysis of Covariance - Covarying

Socio-economic Status and Father in the Home for HIGH SCHOOL BOYS

Tests of Significance using Wilks Lambda Criterion and Canonical Correlations

Test of Roots	F	Df Hyp.	Df Error	P less than	R
1 through 6	1.325	54	3436.2	0.057	0.198
2 through 6	1.105	40	3319.5	0.299	0.150
3 through 6	1.024	28	3167.1	0.426	0.136
4 through 6	0.886	18	2967.1	0.596	0.110
5 through 6	0.774	10	2704.0	0.654	0.097
6 through 6	0.329	4	2359.0	0.859	0.044

Univariate F Tests

Variable	F(9,678)	Mean Sq.	P less than	Standardized Discriminant Function
Father's Acceptance	1.490	1048.562	0.147	-0.353
Father's Hostile Psych. Control	2.042	949.924	0.033	0.398
Father's Lax Discipline	0.737	38.230	0.676	-0.038
Mother's Acceptance	1.591	939.174	0.114	0.550
Mother's Hostile Psych. Control	2.008	1138.042	0.036	0.530
Mother's Lax Discipline	1.299	96.838	0.234	0.200

Discriminant Score Contrasts

One-Child Family	0.268
Two-Child Family	0.168
Three-Child Family	-0.196
Four-Child Family	-0.060
Five-Child Family	-0.199
Six-Child Family	-0.289
Seven-Child Family	-0.075
Eight-Child Family	0.422
Nine-Child Family	0.191
Ten or more Child Family	-0.230

Table V-10

CRPBI Discriminant Function Analysis Based on Multivariate Analysis of Covariance - Covarying Socio-Economic Status and Father in the Home for HIGH SCHOOL GIRLS

Tests of Significance using Wilks Lambda Criterion and Canonical Correlations

Test of Roots	F	Df Hyp.	Df Error	P less than	R
1 through 6	1.651	54	6842.4	.002	0.187
2 through 6	1.024	40	6606.3	.424	0.122
3 through 6	0.746	28	6300.3	.829	0.095
4 through 6	0.489	18	5900.5	.964	0.060
5 through 6	0.388	10	5376.0	.953	0.039
6 through 6	0.445	4	4689.4	.777	0.036

Univariate F Tests

Variable	F(9,1346)	Mean Sq.	P less than	Standardized Discriminant Function
Father's Acceptance	4.353	3383.542	0.001	0.610
Father's Hostile Psych. Control	1.199	643.410	0.291	-0.408
Father's Lax Discipline	1.448	79.181	0.162	0.336
Mother's Acceptance	2.934	1919.618	0.002	0.358
Mother's Hostile Psych. Control	0.845	494.917	0.575	0.178
Mother's Lax Discipline	1.643	110.319	0.098	-0.122

Discriminant Score Contrasts	
One-Child Family	0.359
Two-Child Family	0.233
Three-Child Family	0.158
Four-Child Family	0.063
Five-Child Family	0.187
Six-Child Family	0.033
Seven-Child Family	-0.199
Eight-Child Family	-0.370
Nine-Child Family	-0.171
Ten or More Child Family	-0.293

CRPBI Factors for Junior High School Boys.

None of the roots were significant for the junior high school boys multivariate analysis of covariance and these results were not presented in a table.

CRPBI Factors for Junior High School Girls.

One root was significant beyond the .02 level for the junior high school girls and these results are presented in Table V-11. The discriminant function and the univariate tests indicated that only the Mother's *Acceptance* factor was important for these junior high school girls. As indicated by the discriminant score contrasts in Table V-11, the most accepted girls come from two-child families with three-child families being almost as acceptant. The one-child girls were the most rejected according to this discriminant function. These results contrast sharply with those of Table V-10 for the high school girls.

Discussion of CRPBI Factors

This study has indicated that *Acceptance* was lower for both sexes of children from both parents as family size increases. However the only child who was a girl was considerably less accepted, especially by her father than was the only child who was a boy.

The level of mother's and father's *Hostile Psychological Control* in creased with family size for girls. Hence the best position for a girl was found to be the two-child family.

For neither sex did the CRPBI factor of *Lax Discipline* showed a sinificant relationship to family size. However in the Junior High School Girls with father in the home, there was a steady and significant increase in the use of Lax Discipline by the mother with increasing family size.

Family size seemed to affect the boys less than it did the girls in terms of *Hostile Psychological Control*. The older girls in large families

Table V-11

CRPBI Discriminant Function Analysis Based on Multivariate Analysis of ~~Covariance~~ - Covarying Socio-economic Status and Father in the Home for JUNIOR HIGH GIRLS

Tests of Significance using Wilks Lambda Criterion and Canonical Correlations

Test of Roots	F	Df. Hyp.	Df. Error	P less than	R
1 through 6	1.456	54	8458.8	0.016	0.158
2 through 6	0.910	40	8166.1	0.641	0.099
3 through 6	0.708	28	7787.2	0.870	0.080
4 through 6	0.513	18	7292.5	0.954	0.053
5 through 6	0.457	10	6644.0	0.918	0.044
6 through 6	0.344	4	5795.3	0.848	0.029

Univariate F Tests

Variable	F(9,1663)	Mean Sq.	P less than	Standardized Discriminant Function
Father Acceptance	1.739	1196.111	0.075	-0.269
Father Hostile Psych. Control	1.215	578.944	0.280	0.290
Father Lax Discipline	0.895	47.375	0.529	0.295
Mother Acceptance	3.977	2321.840	0.001	-0.765
Mother Hostile Psych. Control	1.511	864.118	0.138	-0.017
Mother Lax Discipline	0.537	33.097	0.848	-0.151

Discriminant Score Contrasts

One-Child Family	0.152
Two-Child Family	-0.351
Three-Child Family	-0.217
Four-Child Family	-0.030
Five-Child Family	0.039
Six-Child Family	0.100
Seven-Child Family	0.147
Eight-Child Family	0.079
Nine-Child Family	-0.171
Ten or More Child Family	-0.293

especially seemed to have a difficult time. This may be related to cultural valuation of proper behavior for girls. With increased family size, proper supervision of many girls becomes more and more difficult for the parents. Boys, needing less close supervision according to the cultural norms, do not suffer as much from an increase in the Hostile Psychological Control as do girls.

VI FAMILY SPACING EFFECTS ON PARENTS

This chapter attempts to answer the question: "How do large and small families with closely spaced children differ from large and small families with children spaced far apart"?

In order to understand the effects of spacing, the size of the family has to be taken into consideration. Thus for small families closely spaced children do not have the same effect as a closely spaced large family.

It was predicted that small families with well-spaced children would tend to be more characteristic of higher socio-economic strata. It was expected that a small, well-spaced family would tend to be headed by well educated parents.

The interval between marriage and the birth of the first child is one of the most popular issues in the generally unresearched field of child spacing. Maxwell & Montgomery (1969) found a general societal pressure toward early parenthood. They studied the attitudes toward timing of parenthood among white married females and found that they still supported the traditional view that children should be born early in marriage.

Socio-economic status and social mobility are related to the spacing of the first child. Whelpton, Campbell & Patterson (1966) found that the higher the couples socio-economic status, the later the age at marriage and the greater the interval from marriage to the first birth. Elder, (1969) studied a sample of 69 males from the Oakland Growth Study and found that the upwardly mobile married and started families later than the non-mobiles. Although they had more children than the non-mobiles they preferred work-related activities to family and leisure activities.

In a replication using a longitudinal sample of 70 women born in the early 1920's Elder (1970) found that regardless of social origin the upwardly mobile started their families at a later age than the non-mobile even though they did not differ on marital age or number of children.

On the same topic Perucci (1968) studied the relationship of social mobility, marriage and child spacing among married, American born college graduate males. She found that among both high social origin and low social origin college graduates, the spacing from marriage to first birth was positively related to mobility. Thus the low social origin, high mobility college graduates who delayed the birth of their first child resembled the behavior of the high social origin non-mobile peers.

The timing of the first birth is believed to have important economic implications. Freedman & Coombs (1966) reported that couples who had children soon after marriage experienced great financial pressures. However since 20% of their sample consisted of premaritally pregnant couples their results might have been unduly influenced by this factor. Cuthright (1973) studied in great depth the impact of the timing of the first birth. Using a sample of 10,906 white and 6,044 non-white mothers from the 1967 Survey of Economic Opportunity, he found that the risk of female headship or living below the poverty line some 20 years after birth of first child did not not differ for mothers married at least once depending on whether or not they had been pregnant before marriage or borne an illegitimate child. There was a small but significant difference in the size of the families of mothers whose first births were conceived before marriage and mothers whose first births were conceived after marriage. Regarding disrupted marital statuses, there was no difference between never-married mothers and ever-married mothers. He concluded that timing of the first birth was not related to differences in family size, marital or economic status between older white and non-white mothers.

A. Family Size and Time Between Marriage and First Birth

There was an association between family size and the amount of time between marriage and the birth of the first child. As might have been expected, mothers who later had a large family tended to have their first birth relatively soon after marriage. The data are presented in Table VI-1.

Table VI-1

Marriage to First Birth Interval by Family Size

Interval Between Marriage and First Birth	Small Families (N = 254)	Large Families (N = 279)
Less than 18 months	39.4%	73.5%
19 to 36 months	17.3	14.7
More than 36 months	43.3	11.8
	100%	100%

Chi-Square (2 df) = 73.87

Probability less than .001

While some 73 percent of the large family mothers had their first child within the first eighteen months of marriage, only about 39 percent of the two-child mothers did. On the other hand proportionally three times as many of the small-family mothers waited more than three years after marriage to have their first child (43 percent) as did the large-family mothers (12 percent).

B. Family Size and Child Spacing

Also as might be expected, there was a powerful association between family size and the median spacing of the children. The measure used for spacing was the median of the spacing between children for the entire family. For the two-child families it was the actual spacing between the two children. For the large families it was the spacing which was the median of the spacings between adjacent children. This measure was felt to represent an "average" spacing yet not be subject to distortion by one exceptionally long inter-child spacing.

The data are presented below in Table VI-2. It can be seen that twice as many large families as small had very short median spacings; 19 percent of the large and 9 percent of the small had median spacings less than 19 months long. On the other hand the small families were almost seven times as likely to have median spacings longer than three years. While almost half of the small families (49 percent) had median spacings of more than three years, only about 7 percent of the large families had median spacings of this length.

This means that the concept of a "short" or a "long" interchild spacing meant very different things depending on family size.

Table VI-2

Median Interchild Spacing by Family Size

Median Interchild Spacing	Small Families (N = 258)	Large Families (N = 279)
18 months or less	9.3%	19.0%
19 to 26 months	17.8	49.5
27 to 36 months	23.6	24.7
More than 36 months	49.2	6.8
	99.9%	100.0%

Chi-Square (3 df) = 136.69

Probability less than .001

C. Spacing and Socio-Economic Status

On the whole, spacing did not appear to be very much related to the socio-economic variables when examined within family sizes. None of the variables of family income, husband's occupational status, husband's education nor wife's education were significantly related to median spacing for either family size.

When family background variables such as the size of community the husband and wife grew up in and the birthplaces of their parents were examined by spacing, all were also not significantly related.

D. Spacing and Religion

There was an association between the religion of the parents and the spacing of the children within each family size. Table VI-3 presents these results.

Table VI-3

Religion of Mother and Median Interchild Spacing

Median Interchild Spacing	Small Families		Large Families	
	Catholic (N = 65)	Non-Catholic (N = 193)	Catholic (N = 194)	Non-Catholic (N = 85)
18 months or less	6.1%	10.3%	21.1%	14.1
19 to 30 Months	40.0	21.2	61.9	54.1
More than 30 Mo.	53.8	68.4	17.0	31.8
	99.9%	99.9%	100.0%	100.0%
	Chi-Square (2 df) = 9.10		Chi-Square (2 df) = 8.11	
	Probability = .01		Probability = .02	

In both family sizes, the Non-Catholics tended to spread their children out more. Among the small families, while 68 percent of the Non-Catholics had more than 30 months between their children, only about 54 percent of the Catholics did. Among the large families, despite having five or more children, some 32 percent of the Non-Catholics had a median of more than 30 months between children while only about half as many, 17 percent, of the Catholics did.

E. Spacing and Husband-Wife Power

A set of interesting relationships appeared when several of the variables related to who does various activities in the home and who generally makes the final decisions were analyzed by child spacing. From these analyses it seems likely that wives who have widely spaced children tended to be more powerful in the home relative to the power of their husbands. The data for who does the evening dishes is given in Tables VI -4 & 5.

Table VI-4

Who Does the Evening Dishes by Child Spacing, Small Families

Responsibility for Washing Evening Dishes	Median Inter-Child Spacing			
	18 Months or Less (N = 24)	19 to 27 Months (N = 46)	28 to 36 Months (N = 61)	More than 36 Months (N = 127)
Husband [1]	8.3%	4.3%	16.4%	8.7%
Wife[2]	62.5	73.9	60.6	71.7
Children	4.2	6.5	18.0	11.0
Everyone, Other	25.0	15.2	4.9	8.7
	100.0%	99.9%	99.9%	100.1%

Chi-Square (9 df) = 18.39, Probability less than .05

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1. Husband Alone, Husband more than Wife, Husband and Children, and Husband equal to wife.
2. Includes Wife Alone, Wife more than Husband, and Wife with Children

Table VI -5

Who does the Evening Dishes by Child Spacing, Large Families

Responsibility for Washing Evening Dishes	Median Inter-Child Spacing 18 Months or Less (N = 53)	19 to 27 Months (N = 138)	28 to 36 Months (N = 69)	More than 36 Months (N = 19)
Husband[1]	3.8%	4.3%	4.3%	21.1%
Wife[2]	35.8	52.2	52.2	31.6
Children	52.8	34.8	30.4	26.3
Everyone, Other	7.5	8.7	13.0	21.1
	99.9%	100.0%	99.9%	100.1%

Chi-Square (9 df) = 22.04, Probability less than .05

1. Includes Husband Alone, Husband more than Wife, Husband and Children, and Husband equal to Wife.
2. Includes Wife Alone, Wife more than Husband, and Wife with Children

If we examine the roles for husbands in these two tables we see that as the inter-child spacing increased for both family sizes, the husbands were taking increasing responsibility for doing the evening dishes. It should be remembered that all of these families had at least one teen-age child in order to be included in the study.

For the large most distantly spaced families a full 21 percent of the families had the husband responsible for the evening dishes. For these large families with more closely spaced children, the husbands were responsible for the dishes less than five percent of the time.

For the small families (Table VI-4), more husbands were responsible for the dishes in families with spacings of 28 months or greater. In the two family sizes two opposite effects were observable with respect to the responsibilities of Children, Everyone, and Other by child spacing. Among the small families, as the children became more widely spaced, their responsibility for the dishes increased and the responsibility of Everyone, and Other decreased. Exactly the opposite occured among the large families where the responsibility of the children decreased with increasing spacing and the responsibility of Everyone, and Other increased.

The meaning of these effects is not clear, but it can be argued that increased spacing of children in a family seemed to result in more responsibility for household chores for the husband.

F. Spacing and Work History

It was predicted that the mother would be generally not working while the children were under five years of age and that to the extent to which a woman spaces her children out she should have more years during which she has a child under five years of age. This means that there would be a tendency for women with well spaced children to have less of a work history than would women with more compactly spaced families. On the other hand, it was also seen as possible for a women to hold a job with one child under five, but almost impossible with two. Hence in the small families, women with well-spaced children might have been more able to work more than would the short-spaced women. These contrary expectations were tested in this section.

There was predicted to be a relationship between education and child spacing in that among the small families the well-educated women were thought to want to get the brunt of child-rearing done in one continuous period of time so as to be able to reintegrate themselves into the work force. Mothers of closely spaced children were expected to abandon their work commitment totally during the early years of child rearing.

Work history was not expected to be related to spacing of the children for women with large families.

Review of the Literature

The last few years have witnessed considerable interest in the relationship between family size and the mother's participation in the labor force. Sweet (1973), Weller (1971), Papanek (1973), and Michel(1971) found that a high number of children had a negative effect on the employment of women in industrialized countries.

Weller (1971) reviewed a number of articles which suggested that the employment of women should depress fertility. His review of research in industrialized countries made him conclude that there was an inverse relationship between a woman's employment status and the number of children ever born, ideal family size, and the expected family size. In less industrialized settings, however,the findings of the empirical research are not so clear and conclusive.

The effect of age at marriage on employment has been studied by several investigators. Sweet (1973) thought that there would be a relationship between age at marriage and work history but was not able to find it. Weller (1971) proposed that delayed marriage might affect both fertility (decreasing it) and desire for employment (increasing it). He felt that one of the primary mediating variables between fertility and employment was the compatibility between being a mother and being employed. Where these two factors are compatible,there should be a lessened effect on employment. On the other hand, where it is difficult to be employed and be a mother, more mothers would be more likely to be unemployed.

Weller (1971) suggested that the causal direction of the work participation of mothers was likely to be a function of the presence of culturally acceptable birth control technology. Where that technology or cultural acceptability was absent, the relationship would tend to be produced by self-selection of subfecund and involuntarily sterile women into the labor force. When the technology was present employment would affect fertility and there would probably also be some self-selection. When the roles of mother and worker were relatively compatible, fertility differences between employed and unemployed women would be negligible. Weller felt that the role incompatibility might arise from the nature of employment, the social organization of the child care system, the system of normative beliefs concerning employment of women, and the impact of employment on the family structure and its social and economic situation.

Michel (1971) considered the effect of employment on a woman's leisure time and in general found that while labor saving (but not necessarily time saving) devices become prevalent, the employed mother continues to have little leisure time, particularly as family size increases.

Sweet (1973) reported that having a family has been largely seen as a constraining influence on the employment of wives, in that family responsibilities take time and have a higher priority than other uses of time. A French study reported by Sweet showed that childless women spend 61 hours per week on housework while women with 1,2,and 3 children spend 78, 89, and 100 hours per week respectively on housework. Sweet suggested that both the variables of the number and the ages of children should be examined in any study of the effect of family responsibilities on the employment of women.

Sweet (1973) said that there was some weak evidence to suggest that women were more likely to be employed whatever the age of their youngest child if they did not expect to have additional children. However, women who had had all the children they wanted were likely on the average to have had more children, and for that reason were less likely to be employed. The relationship was complex. One of Sweet's own findings was that for women over 50 (whose child-bearing is considered to be completed), as the number of children ever born increased, the proportion of women never having been employed increased rapidly from 14 percent for white women with no children to 30 percent for those with four or more children. Sweet felt that this was a real effect of fertility and not confounded by education and economic pressure.

Sweet also found that there was a continuous increase in the proportion of women employed based on age of youngest child from age 0 to age 12-13. After 13, the proportion increased at a rate slightly more than 2 percent per year. Thus as children became older, the women's participation in the labor force increased.

The age of the women is another important factor to consider in analyzing her participation in the labor force. In general, of women under 50 who had any children 6 to 17 years of age, 34 percent to 38 percent were employed. If a woman was under fifty, it was the ages of her children and not her own age which influenced her labor market participation. Up to age 40 age had very little effect on the employment of mothers, independent of age status of the children. After age 40, the rates of employment dropped quite quickly within each of the children's age levels.

Other approaches to the study of family size, home responsibilities, and employment for women have shown that an equalitarian sex role ideology where men and women share the responsibilities of home and work has not been achieved yet. Many researchers emphasize the continued willingness of women to subjugate employment to family (Feldman (1973), Paloma & Garland,(1971), Harbeson (1971), and Komarovsky (1973).

Paloma and Garland (1971) found that children were the reason for career interruption. When women combine marriage with a profession, marriage becomes the salient role. These investigators felt it was difficult to make two full-time commitments.

Sweet mentioned the following factors as affecting the understanding of the relationship between size of family and spacing and the work participation of women: 1) controls on current socio-economic status or need to be employed may not reflect very well an earlier state; 2) number of children desired or expected many not be the same number of children desired and expected earlier in the marriage; 3) attempts to draw conclusions regarding causation from birth interval may have occurred by choice, or because of a definite fecundity problem; 4) at any given point in time, a woman is not faced with a simple decision to have an additional child or to seek employment; if she already has children, she has to consider the ones she has in her decision making process; 5) past employment experience may modify both the probability of being employed in the present and also fertility decisions.

For his own causal analysis of the relationship between size of family and employment, Sweet posited four possible explanations: 1) employment (because of economic or personal reasons) leads to restricted fertility; 2) restricted fertility (because of sub-fecundity or other reasons besides wanting to be employed)makes it possible to be employed; 3) the desire for increased fertility leads to restrictions on employment activity; and 4) employment and fertility restrictions both result from some third variable or combination of variables.

Work History Results--Among the small families there was some indication that the spacing of children was related to the extent to which a wife works after marriage. The data presented in Table VI-6 indicates that in the more widely spaced families, the wife has tended to work somewhat more after marriage.

Table VI-6

Years of Wife Working After Marriage by Child Separation

Small Families

Years of Work History After Marriage	Median Child-Spacing 30 Months or Less (N = 91)	 31 Months or More (N = 167)
One Year or Less	33.0%	31.7%
Two to Four Years	26.4	20.4
Five or Six Years	17.6	8.4
Seven to Nine Years	8.8	17.4
Ten or More Years	14.3	22.2
	100.1%	100.1%

Chi-Square (4 df) = 10.16

Probability less than .05

While about 23 percent of the mothers with children spaced less than 30 months apart worked seven or more years after marriage almost 40 percent of the small family wives with children spaced more than 30 months apart worked this much after marriage. A similar analysis for the large family mothers failed to find a significant association between work history and child spacing.

Another analysis examined an index which was the proportion of the years since marriage which the mother had worked. There was found to be a striking and highly significant difference between family sizes on this index. The small family mothers had, on the average, worked 27.5 percent of the time since they married while the large family mothers had averaged working only 13.4 percent of the time. When this index was examined further within each family size by spacing, however, there was no significant difference for the large families. For the small families, the results were also non-significant, but an interesting pattern emerged. This pattern might turn out to be statistically significant if a larger sample was obtained or if other variables could have been controlled. The small family mothers with spacings of less than 19 months worked an average of 31 percent of the time since they married. Small family mothers with spacings between 19 and 30 months worked an average of 23 percent of the time since marriage while those small family mothers with inter-child spacings of more than 30 months had worked an average of 29 percent of the time since marriage.

These results indicate that there is very little observable effect on the work history of a woman who has five or more children as affected by the median spacing of her children. Among women who have only two children, there is an indication that the well-spaced family, and possibly the very closely spaced families lead to greater labor force participation, in contrast to small families of middle spacing.

G. Child Spacing and Use of Birth Control Methods

Small families with closely spaced children could be the product of poorly controlled fertility or of the voluntary intention of the parents. If intentionally planned, small families with closely spaced children would be expected to predominate among late married middle and upper class couples. Young middle and upper class couples who believe that children are happier when they are raised close together are also likely candidates for this type of family structure. It was predicted that such families would be aware of the personal goals they would like to find in life and would be knowledgeable of birth control methods. Both small closely spaced and distantly spaced families were expected to come more likely from Jewish or Protestant backgrounds than from Catholic.

Parents of large, distantly spaced families were expected to be more knowledgeable about birth control methods than were large, closely spaced families.

The mothers were asked what they considered to be the best length of time between children. As was expected, there was a strong association between the median spacing of the woman's own family and her perception of the optimum spacing for families in general. The data are presented in Table VI-7 for small families and in Table VI-8 for large families.

Table VI-7

Mother's Stated "Best" Length of Time Between Children by Median Child-Spacing - Small Families

Stated "Best" Spacing	Median Child-Spacing 18 Months or Less (N = 22)	19 to 27 Months (N = 43)	28 to 36 Months (N = 58)	More than 36 Months (N = 117)
Less than 2 Years	22.7%	9.3%	3.4%	1.7%
Two Years	59.1	72.1	50.0	45.3
More than 2 Years	18.1	18.6	46.6	53.0
	99.9%	100.0%	100.0	100.0

Chi-Square (6 df) = 33.50 Probability less than .001

Table VI-8

Mother's Stated "Best" Length of Time Between Children by Median Child-Spacing - Large Families

Stated "Best" Spacing	Median Child-Spacing 18 Months or Less (N = 47)	19 to 27 Months (N = 127)	28 to 36 Months (N = 66)	More than 36 Months (N = 19)
Less than 2 Years	31.9%	18.1%	6.1%	15.8%
Two Years	55.3	59.1	60.6	26.3
More than 2 Years	12.8	22.8	33.3	57.9
	100.0%	100.0%	100.0%	100.0%

Chi-Square (6 df) = 26.40, Probability less than .001

Among small family mothers who had spaced their own children more than three years apart only about 2 percent felt that the best spacing was less than two years while more than half felt that the best spacing was more than two years. On the other hand, among two-child mothers whose children were spaced less than 18 months apart 23 percent reported that spacing less than two years was best and only 18 percent felt that spacing of more than two years was best.

The pattern was similar for the large families. Among mothers whose median spacing between children was 18 months or less about 13 percent were of the opinion that spacing of more than two years was "best" while among large-family mothers with median spacing of more than 36 months 58 percent felt that such longer spacing was best.

The issue of use of birth control methods was also examined. Among the small families, some 87 percent used birth control methods and there was no significant variation in the percentage using birth control methods by child spacing. On the other hand there was a highly significant variation in the use of birth control methods by spacing among the families with five or more children. This data is presented in Table VI-9.

As can be seen in the table, the percent using birth control methods increases from 71 percent among the short spacing families to 86 percent among the medium spacing families to 90 percent among the widely spacing families. Another way of looking at this data is in terms of those who do not use birth control. While 29 percent do not among the closely spaced families, this falls to 14 percent among the medium spacing and falls further to 10 percent among the most distantly spaced large families.

Table VI-9

Use of Birth Control Methods by Median Child-Spacing

Large Families

Use of Birth Control	Median Child-Spacing 18 Months or Less (N = 51)	19 to 30 Months (N = 164)	More Than 30 Months (N = 60)
Yes	70.6%	86.0%	90.0%
No	29.4	14.0	10.0

Chi-Square (2 df) = 32.43

Probability less than .001

From Table VI-9 it can be seen that the large families who had relatively short median inter-child spacings were less likely to use birth control methods.

H. Age of Husband at Time of Marriage and Spacing

It had been predicted that small families with closely spaced children would often tend to occur among late marrying couples who could control their fertility. This was indeed the case. The data is presented in Table VI-10. Among those couples with only two children who had them spaced 18 months or less apart, some 33 percent had the husband over age 30 at the time of marriage. This is in contrast to only 12 percent having the husband over age 30 among couples with two children spaced more than 30 months apart.

Table VI-10

Age of Husband at Time of Marriage and Spacing - Small Families

	Median Child-Spacing		
Age of Husband at Marriage	18 Months or Less (N = 24)	19 to 30 Months (N = 67)	More Than 30 Months (N = 167)
Less than 22	4.2%	9.0%	11.4%
22 to 25 Years	50.0	22.4	43.1
26 to 29 Years	12.5	40.3	33.5
Over 30 Years	33.3	28.4	12.0
	100.0%	100.1%	100.0%

Chi-Square (6 df) = 21.95

Probability less than .01

In this sample, fertility control was not a factor since better than 85 percent of all small families in this sample were using birth control methods. Thus for the small families, the short spacing was often associated with couples who married late.

VII EFFECTS OF FAMILY SIZE AND SPACING ON LEISURE ACTIVITIES

It was predicted that self-actualization would be easier to achieve by small family parents. It was expected that the small family parents would tend to have more outside interests such as strong involvement in professional, political, artistic, athletic or social organizations. The parents of small families were expected to participate more in voluntary formal organizations of all kinds, with the possible exception of religious ones. Furthermore it was predicted that there would be a greater tendency for both parents of the small families to be involved in some special interest outside the home. It was predicted that large families would tend to participate less in voluntary organizations and when they did participate, it was expected that only the father would be participating.

This chapter tests some of these hypotheses and further examines the effects of spacing, the age of the youngest child, and the mother's work status on the family's leisure time activities.

A. Wives' Leisure Time Activities by Family Size

In fact, for most of the leisure time activities examined, there was no significant family size effect. For the wives there was no family size effect on her frequency of participation in fishing, boating, active sports, attendance at nightclubs, fairs, or college classes. Similarly there was no significant family size effect on wives' gardening, making and fixing things, playing cards, attending concerts, or participating in a hobby. Further there was no significant association between family size and a wife's participation in political, labor, sports, social, school, or civic associations.

Table VII-1

Wife's Attendance at Sports Events by Family Size

Attendance at Sports Events by Wife	Small Families (N = 255)	Large Families (N = 279)
Twice a Week or More	2.7%	6.1%
Once a Week	3.5	10.8
Every 2 or 3 Weeks	9.4	14.0
Six to 12 Times a Year	19.2	21.9
One to Five Times a Year	27.1	24.4
Not at all this year	38.0	22.9

Chi-Square (5 df) = 26.10, Probability less than .001

However family size did strongly affect certain leisure time activities. The mothers of small families were far less likely to attend sports events than were the mothers of large families. While about six percent of the small-family mothers attended such events once a week or more often, almost three times as many (17 percent) of the large family mothers did. This can perhaps be understood when it is considered that the mother of a large family was far more likely to have at least one child actively participating in sports than would be the mother with only two children. This data is presented in Table VII-1.

Another difference between small and large-family mothers was found to be shopping. The large-family mothers were much more involved with shopping than were small family mothers. The data are given in Table VII-2.

Table VII-2

Mothers' Shopping by Family Size

Frequency of Shopping by Mother	Family Size Small (N = 256)	Family Size Large (N = 278)
Every Day	0.0%	2.5%
Twice a Week	11.7	11.9
Once a Week	24.6	32.0
Every 2 or 3 Weeks	38.7	34.9
Six to 12 times per Year	17.6	14.0
Five or Fewer times per Year	7.7	4.7
	100.3%	100.0%

Chi-Square (5 df) = 12.28, Probability less than .05

The major difference in Table VII-2 is in the more frequent shopping which the large family mothers did, especially the fact that some even had to shop every day.

It had been predicted that the small family mothers would be more active in the community, especially in terms of voluntary activity. However this proved not to be the case, in fact the large family mothers were somewhat more active in volunteering. The data are presented in Table VII-3.

Table VII-3

Mothers' Volunteering by Family Size

Frequency of Volunteering in Community Activities	Family Size Small (N = 255)	Large (N = 278)
Everyday	3.1%	2.2%
Twice a Week	9.8	12.9
Once a Week	16.9	18.7
Every 2 or 3 Weeks	12.9	14.4
Six to 12 Times per Year	8.2	18.3
One to Five Times per Year	22.7	18.0
Not at All This Year	26.3	15.5
	99.9%	100.0

Chi-Square (6 df) = 21.17, Probability less than .01

In this table it can be seen that while almost half of the small family mothers (49 percent) volunteered less than five times a year only about a third of the large family mothers were this inactive.

On the other hand the small family mothers were considerably more active in Business or Professional Associations. This probably reflects the greater involvement in the labor force by the small family mothers. As can be seen in Table VII-4, while 17 percent of the large family mothers were involved at one level or another in such business or professional associations some 25 percent of the small family mothers were. Moreover while less than one percent of the large family mothers were able to be extremely active in such an organization four times as many of the small family mothers were able to be so extremely active.

Table VII-4

Mothers' Activity in Business or Professional Associations by Family Size

Extent of Activity of Mother	Family Size	
	Small (N = 256)	Large (N = 279)
Extremely Active	3.1%	0.7%
Very Active	2.0	3.2
Fairly Active	4.3	5.0
Rarely Active	7.4	3.6
Not Active	8.6	4.3
Not a Member	74.6	83.2
	100.0%	100.0

Chi-Square (5 df) = 13.85, Probability less than .02

There was some association between a mother's attending classes and her family size. Some 3.9 percent of the small family mothers were attending classes every day while only 1.1 percent of the large family mothers were. This three-fold greater participation rate among the small family mothers was statistically significant at the .05 level.

In summary then, small family mothers were found to attend sports events, shop, and, volunteer in the community less frequently, be more active in business and professional associations, and be more likely to attend classes daily than were the large family mothers. Not surprisingly, it seems that the large family mothers spend more of their time devoted to family pursuits, even if only as spectators to their children's sports activities and less time devoted to adult oriented community, business or educational activities.

B. Husbands' Leisure Time Activities by Family Size

Most of the leisure time activities of the husband were not related to family size. Specifically, the extent of the husband's activities in fishing, boating, attending classes, nightclubs, fairs and museums, gardening, concerts, making and fixing things, shopping, helping neighbors, playing cards or indoor sports, volunteering in the community, church organizational activity, school organizations, political organizations, labor organizations, business, social, or civic organizations and even visiting with relatives showed no significant difference by family size.

As with the wives, however, there was a family size effect on the husbands' attendance at sports events. As can be seen in Table VII-5, more than 20 percent of the large family fathers were attending sports events once a week or more often while only about a third as many (7 percent) of the small family fathers were. At the other end of the scale while more than one out of four of the small family fathers were not attending sports events at all during the past year, only 16 percent of the large family fathers were as inactive.

Table VII-5

Fathers' Attendance at Sports Events

by Family Size

Frequency of Fathers' Attendance at Sports Events	Family Size Small (N = 255)	 Large (N = 278)
Twice a Week or More	3.1%	7.5%
Once a Week	4.3	13.3
Every 2 or 3 Weeks	9.4	15.1
Six to 12 Times per Year	24.7	24.8
One to 5 Times per Year	31.8	23.7
Not at All This Year	26.7	15.5
	100.0%	99.9

Chi-Square (5 df) = 34.95, Probability less than .001

Small family fathers were more able to participate in a hobby than were the large family fathers. Some 13 percent of the small family fathers but only about six percent of the large family fathers were able to have a hobby. The data is given in Table VII-6.

~~Table VII-6~~

Fathers' Participation in a Hobby by Family Size

Extent of Activity in Hobbies by Husbands	Family Size	
	Small (N = 255)	Large (N = 279)
Extremely Active	3.6%	0.4%
Very Active	2.4	1.8
Fairly Active	4.7	2.5
Rarely or Not Active	2.4	1.1
No Hobby	87.0	94.3
	100.1%	100.1%

Chi-Square (4 df) = 11.22, Probability less than .05

While the small family fathers were more involved in their hobbies than were the large family fathers, these latter were more involved in active sports than were the small family fathers. Almost one out of four of the large family fathers was extremely or very active in participating in active sports while only 14 percent of the small family fathers were. While 62 percent of the small family fathers did not participate at all in active sports, the lesser percentage of 57 percent of the large family fathers did not participate at all.

Table VII-7

Fathers' Activity in Sports by Family Size

Extent of Activity in Active Sports by Husband	Family Size Small (N = 255)	Large (N = 277)
Extremely Active	4.3%	9.4%
Very Active	9.8	14.4
Fairly Active	13.3	13.0
Rarely Active	2.0	2.5
Not Active	8.6	3.2
Not Active in Sports at All	62.0	57.4
	100.0%	99.9%

Chi-Square (5 df) = 14.50, Probability less than .02

In summary, for most aspects of leisure activity there was no significant difference between fathers of different sized families. However for participation in active sports and attendance at sports events, the large family fathers were more involved than were the small family fathers. On the other hand the small family fathers were more likely to be involved in a hobby than were the fathers of five or more children.

C. Mothers' Leisure Time Activities by Working Status and Age of Children

In this section the leisure time activities of the mothers were examined as affected by working status and age of youngest child, while controlling for family size. Working status was categorized as: regular full-time, occasional or part-time, and never worked.

Hobby Activities - The mothers' activities with respect to hobbies was examined relative to work status. Table VII-8 presents this data.

Table VII-8

Wives' Involvement with Hobbies by Work Status, Controlled on Family Size

Frequency of Involvement in Hobbies	Small: Full-Time Work (N = 70)	Small: Occasional Work (N = 88)	Small: Never Worked (N = 97)	Large: Full-Time Work (N = 52)	Large: Occasional Work (N = 49)	Large: Never Worked (N = 178)
Once a Week or More	42.9%	45.5%	45.4%	44.2%	44.9%	47.2%
Once Every 2 or 3 Weeks	14.3	14.8	9.3	9.6	12.2	9.6
Six to 12 Times/Year	2.9	5.7	16.5	7.7	8.2	6.7
One to 5 Times/Year	15.7	4.5	6.2	15.4	8.2	6.7
Not This Year	24.3	29.5	22.7	23.1	26.5	29.8
	100.1%	100.0	100.1	100.0	100.0	100.0

Family Size — Small: Chi-Square (8 df) = 19.07, Prob. less than .02

Family Size — Large: Chi-Square (8 df) = 4.72, Prob. Not Significant

Among the small family mothers, the women who did not work or who worked only occasionally were able to spend more time on hobbies than were women who worked full-time. Among the large family women there was no significant relationship between work status and involvement in hobbies.

After controlling for family size, the women's involvement with hobbies was again examined with respect to the age of her youngest child. This data is presented in Table VII-9.

Table VII-9

Wives' Involvement with Hobbies by Age of Youngest Child, Controlled on Family Size

Frequency of Involvement in Hobbies	Family Size				
	Small		Large		
	Child 10 or Younger (N = 45)	Child Over 10 (N = 211)	Child 6 or Younger (N = 118)	Child 7 to 10 Years (N = 102)	Child Over 10 (N = 59)
Once a Week or More	57.8%	41.7%	54.2%	42.2%	37.3%
Once Every 2 or 3 Weeks	8.9	13.3	11.9	6.9	11.9
Six to 12 Times/Year	11.1	8.5	9.3	4.9	6.8
One to 5 Times/Year	6.7	8.5	3.4	10.8	15.3
Not This Year	15.6	28.0	21.2	35.3	28.8

Chi-Square (4 df) = 5.37 Prob. Not Significant

Chi-Square (8 df) = 17.38 Prob. less than .05

The age of the youngest child in a large family was categorized as six years or less, seven to ten, and over ten. Among the small families there were too few families with very young children so only two categories could be used, ten and under and over ten.

As indicated in Table VII-9, the large family mothers with younger children were more likely to be involved in hobbies than were the mothers of the older children. The gamma coefficient for the large family women was .20, indicating a moderate degree of relationship. While some 44 percent of the large family women with children over ten were involved with hobbies less than six times a year, only 25 percent of the mothers with children under six were so minimally involved. The direction of effect (mothers of younger children more involved in hobbies) was the same for the small family mothers but the effect was not significant.

Gardening Activities - The women's involvement in gardening was next examined. There was a significant relationship between work status and extent of gardening activities, as might be expected, but only for the large family mothers. Women who had never worked were more involved in gardening than were women who worked part or full-time. While the effect was significant only for the large family mothers, its direction was the same for the small family mothers. Some 47 percent of the large family mothers who were not involved in the labor force would be doing some gardening activities once a week or more often, while only about 29 percent of the women with full-time jobs were this active. Table VII-10 presents the data.

The age of the youngest child was next examined for its effect on the gardening activities of the mothers. This data is presented in Table VII-11. The effect of the age of the youngest child was significant for the small-family mothers but not for the large family mothers. The direction of influence was that the small family mothers with older children were more involved with gardening than were the mothers with children under ten when only the gardening once a week or more often was considered.

Table VII-10

Wives' Involvement with Gardening by Work Status Controlled on Family Size

Frequency of Involvement in Gardening	Family Size					
	Small			Large		
	Full-Time Work (N = 70)	Occasional Work (N = 89)	Never Worked (N = 98)	Full-Time Work (N = 52)	Occasional Work (N = 49)	Never Worked (N = 178)
Once a Week or More	37.1%	30.3%	42.9%	28.8%	42.9%	46.6%
Once Every 2 or 3 Weeks	20.0	23.6	17.3	25.0	12.2	14.0
Six to 12 Times per Year	12.9	15.7	13.3	13.5	20.4	12.9
One to 5 Times per Year	11.4	14.6	14.3	21.2	4.1	12.4
Not This Year	18.6	15.7	12.2	11.5	20.4	14.0
	100.0%	99.9%	100.0%	100.0%	100.0%	99.9%
	Chi-Square (8 df) = 4.62			Chi-Square (8 df) = 15.42		
	Prob. Not Significant			Prob. less than .06		

Table VII-11

Wives' Involvement in Gardening by Age of Youngest Child, Controlled on Family Size

	Family Size				
Frequency of Involvement In Gardening	Small		Large		
	Child 10 or Younger (N = 45)	Child Over 10 (N = 213)	Child 6 or Younger (N = 118)	Child 7 to 10 (N = 102)	Child Over 10 (N = 59)
Once a Week or More	28.9%	38.5%	43.2%	45.1%	37.3%
Once in 2 or 3 Weeks	33.3	17.4	17.8	13.7	15.3
Six to 12 Times/Year	4.4	16.0	11.9	12.7	22.0
One to 5 Times/Year	22.2	11.7	14.4	13.7	6.8
Not This Year	11.1	16.4	12.7	14.7	18.6
	99.9%	100.0%	100.0%	99.9%	100.0%
	Chi-Square (4 df) = 12.85		Chi-Square (8 df) = 7.20		
	Prob. less than .05		Prob. Not Significant		

However if the Not involved this year category is examined, it is the women with older children who were less involved in gardening. If the two most active categories are combined, it is the small family women with the youngest children who were more involved with gardening. This trend is in the same direction for the large-family women but was not significant for them.

Boating, Swimming and Picnicking - Work status of the women in both large and in small families was significantly related to their involvement in recreational activities of boating, swimming and picnicking. Table VII-12 presents the data.

Table VII-12

Mothers' Involvement in Boating, Swimming and Picnicking by Work Status, Controlled on Family Size

	Family Size					
Frequency of	Small			Large		
Involvement in Boating etc.	Full-Time Work (N = 70)	Occasional Work (N = 89)	Never Worked (N = 98)	Full-Time Work (N = 52)	Occasional Work (N = 49)	Never Worked (N = 178)
Once a Week or More	18.6%	32.6%	43.9%	32.7%	32.7%	38.2%
Once Every 2 Or 3 Weeks	31.4	29.2	13.3	21.2	14.3	29.8
Six to 12 Times per Year	30.0	15.7	23.5	32.7	24.5	22.5
One to 5 Times per year	14.3	14.6	17.3	7.7	20.4	7.9
Not This Year	5.7	7.9	2.0	5.8	8.2	1.7
	100.0%	100.0%	100.0%	100.1%	100.1%	100.1%

Chi-Square (8 df) = 22.44 Chi-Square (8 df) = 18.05

Prob. less than .01 Prob. less than .01

For both family sizes, the women who did not work spent considerably more time in swimming, boating or picnicking. In fact almost 44 percent of the small family women and 38 percent of the large family women who did not work, engaged in these activities once a week or more often. It should be remembered that many of these families were of an economic level where they had access to private swimming pools of their own, of neighbors, or of some club. Among the small family women only about 19 percent of the full-time working women were able to participate in these activities this often.

Table VII-13

Mothers' Involvement in Boating, Swimming, and Picnicking by Age of Youngest Child, Controlling on Family Size

Frequency of Involvement in Swimming, etc.	Family Size: Small		Large		
	Child 10 or Younger (N = 45)	Child Over 10 (N = 213)	Child 6 or Younger (N = 118)	Child 7 to 10 (N = 102)	Child Over 10 (N = 59)
Once a Week or More	33.3%	32.9%	43.2%	33.3%	27.1%
Once in 2 or 3 Weeks	35.6	21.1	27.1	24.5	23.7
Six to 12 Times/Year	26.7	22.1	23.7	27.5	22.0
One to 5 Times/Year or Less Often	4.4	23.9	5.9	14.7	27.1
	100.0%	100.0	99.9	100.0	99.9

Chi-Square (3 df) = 10.49   Chi-Square (6 df) = 17.04

Prob. less than .02   Prob. less than .01

The extent to which a mother participated in swimming, boating and picnicking was significantly related to the age of her youngest child in both family sizes. The data is presented in Table VII-13.

As their children got older, these mothers became less active in swimming and similar recreational activities. Among women of both family sizes, when the youngest child was older than ten, about one fourth of the mothers were not involved at all in these activities. On the other hand with younger children, only about five or six percent did not participate at all. More mothers with younger children were involved in swimming and such activities on a weekly basis or more frequently than were mothers with older children.

Attendance at Sporting Events- The attendance of a mother at sporting events was not significantly related to her work status but was related to the age of her youngest child among the large family mothers. Those large family mothers with their youngest child between seven and ten were far more frequent attenders of sporting events than were mothers with a child younger than six or with the youngest child older than ten. There was no significant relationship between attendance at sporting events and age of youngest child for the small family mothers. Table VII-14 presents this data.

Among the large family mothers some 41 percent of those with a youngest child between seven and ten were attending sports events every two or three weeks or more often. Mothers with children under six may be more likely to stay home to take care of them. However, if all the children in the family are over ten, the mother may not be as involved with their sports activities, because they are old enough to care for themselves or to attend sports events with older brothers and sisters.

Table VII-14

Mothers' Attendance at Sporting Events by Age of Youngest Child, Controlled on Family Size

Frequency of Attendance at Sporting Events	Family Size				
	Small		Large		
	Child 10 or Younger (N = 44)	Child Over 10 (N = 213)	Child 6 or Younger (N = 118)	Child 7 to 10 (N = 102)	Child Over 10 (N = 59)
Once Every 2 or 3 Weeks or More Often	6.8%	17.4%	28.8%	41.2%	16.9%
Six to 12 Times per Year	18.2	19.2	29.7	14.7	18.6
One to 5 Times per Year	34.1	25.8	19.5	24.5	33.9
Not This Year	40.9	37.6	22.0	19.6	30.5
	100.0%	100.0%	100.0%	100.0%	99.9%

Chi-Square (3 df) = 3.65 Chi-Square (6 df) = 18.70

Prob. Not Significant Prob. less than .01

In summary, for both small and large families the mothers who had younger children and who did not work spent more time with hobbies, gardening, boating, swimming, and picnicking. Large family mothers who have children between the ages of seven and ten were more likely to spend some of their leisure time at sporting events.

D. Wives' Leisure Activities Outside the Home by Work Status and Age of Child

Volunteering in the Community - The first activity examined in which the mother participated away from her family was volunteering in the community. The data on volunteering is presented in Table VII-15.

Table VII-15

Wives' Volunteering Activities by Work Status, Controlled on Family Size

	Family Size					
Frequency of	Small			Large		
Involvement in Volunteering	Full-Time Work (N = 69)	Occasional Work (N = 89)	Never Worked (N = 98)	Full-Time Work (N = 52)	Occasional Work (N = 49)	Never Worked (N = 177)
Once a Week or More	20.3%	21.3%	43.9%	15.4%	22.4%	42.4%
Once Every 2 or 3 Weeks	14.5	13.5	12.2	21.2	18.4	11.3
Six to 12 Times per Year	8.7	9.0	7.1	26.9	20.4	15.3
One to 5 Times per Year	23.2	25.8	19.4	19.2	24.5	15.8
Not This Year	33.3	30.3	17.3	17.3	14.3	15.3
	100.0%	99.9%	99.9%	100.0%	100.0%	100.1%

Chi-Square (8 df) = 16.89 Chi-Square (8 df) = 19.24

Prob. less than .05 Prob. less than .02

For both family sizes there was a significant trend with the wives who did not work volunteering more frequently. Among the small family mothers roughly one-third of the working mothers did not volunteer at all while only about one in six of the non-working small family mothers were not at all involved in voluntary activities in the community. On the other hand about 44 percent of the small family women who were not working were volunteering once a week or more often as contrasted to only about 20 percent of the working small family mothers.

The trends were similar and even more significant for the large family mothers. The gamma coefficient was -.26 for the small family mothers and -.21 for the large family mothers. This indicates a substantial relationship between work status and voluntary activities.

When volunteering was examined with respect to the age of the youngest child there was a significant effect for the large family mothers, but not for the small family mothers. The trend for the small family mothers, while not significant at the .05 level was significant at the .10 level. For both family sizes, the mothers who had the youngest children did more community volunteering. These data are presented in Table VII-16.

Social Organization Activities - A woman's involvement in social organizations was found to be not significantly affected by her work status but there was a significant relationship between the age of a woman's youngest child and her activities in social organizations among the small family mothers. While some 74 percent of these mothers with a child over ten were not members of any social club or organization, among those women with children under ten only 56 percent were not members. Thus the presence of a young child tended to encourage a mother to become a member of social clubs. This data is presented in Table VII-17.

Table VII-16

Mothers' Volunteering Activity by Age of Youngest Child, Controlled on Family Size

Frequency of Participation in Volunteering	Family Size				
	Small		Large		
	Child 10 or Younger (N = 45)	Child Over 10 (N = 212)	Child 6 or Younger (N = 118)	Child 7 to 10 (N = 101)	Child Over 10 (N = 59)
Once a Week or More	44.4%	26.4%	34.7%	37.6%	25.4%
Once Every 2 or 3 Weeks	13.3	13.2	13.6	13.9	16.9
Six to 12 Times per Year	2.2	9.4	16.1	25.7	10.2
One to 5 Times per Year	24.4	22.2	21.2	9.9	25.4
Not This Year	15.6	28.8	14.4	12.9	22.0
	Chi-Square (4 df) = 8.98 Prob. less than .10		Chi-Square (8 df) = 15.85 Prob. less than .05		

Table VII-17

Mothers' Involvement with Social Organizations by Age of Youngest Child, Controlled on Family Size

Degree of Involvement in Social Organizations by Mother	Family Size				
	Small		Large		
	Child 10 or Younger (N = 45)	Child Over 10 (N = 211)	Child 6 or Younger (N = 118)	Child 7 to 10 (N = 102)	Child Over 10 (N = 58)
Very or Extremely Active	6.7%	7.1%	11.0%	7.8%	3.4%
Fairly Active	15.6	11.4	13.6	12.7	19.0
Member, but Rarely Active	22.2	7.6	7.6	5.9	6.9
Not a Member	55.6	73.9	67.8	73.5	70.7
	Chi-Square (3 df) = 10.14 Prob. less than .05		Chi-Square (6 df) = 4.32 Prob. Not Significant		

Active Sports Participation - The involvement of women in active sports was found to be related to work status among the small family mothers.

Table VII-18

Mothers' Participation in Active Sports by Work Status Controlled on Family Size

Frequency of Participation in Active Sports	Small: Full-Time Work (N = 70)	Small: Occasional Work (N = 89)	Small: No Work (N = 98)	Large: Full-Time Work (N = 52)	Large: Occasional Work (N = 49)	Large: No Work (N = 177)
Once a Week or More	30.0%	20.2%	26.5%	23.1%	30.6%	39.5%
Once Every 2 or 3 Weeks	2.9	7.9	9.2	13.5	6.1	9.0
Six to 12 Times per Year	12.9	19.1	7.1	7.7	6.1	8.5
One to 5 Times per Year	15.7	5.6	6.1	13.5	14.3	6.8
Not This Year	38.6	47.2	51.0	42.3	42.9	36.2
	100.1%	100.0%	99.9%	100.1%	100.0%	100.0%
	Chi-Square (8 df) = 16.40			Chi-Square (8 df) = 9.37		
	Prob. less than .05			Prob. Not Significant		

As indicated in Table VII-18, the women who were actually working full time were also the most active in participating in active sports. It was the women who were working occasionally or part-time who were least active in sports. On the other hand more than half of the women who were not working at all were also not at all involved with active sports.

E. Leisure Time Activities and Child Spacing

Two leisure time activities were found to be related to the median child spacing of the families. The data for the mothers involvement in school organizations and child spacing is given in Table VII-19 while the data for the mothers' attendance at classes and lectures is given in Table VII-20.

Table VII-19

Mothers' Involvement in School Organizations by Median Child Spacing, Controlled on Family Size

Mothers' Involvement in School Organizations	Family Size							
	Small				Large			
	Median Spacing				Median Spacing			
	0-18 (N=24)	19-27 (N=46)	28-36 (N=61)	37 up (N=126)	0-18 (N=53)	19-27 (N=138)	28-36 (N=69)	37 up (N=19)
Very or Extremely Active	12.5%	8.6%	21.4%	26.2%	17.0%	17.1%	15.9%	5.3%
Fairly Active	16.7	8.7	27.9	18.3	22.6	25.4	23.2	47.4
Rarely Active	37.5	10.9	16.4	18.3	17.0	21.0	13.0	10.5
Member, Not Active	8.3	41.3	21.3	19.8	35.8	20.3	31.9	26.3
Not a Member	25.0	30.4	13.1	17.5	7.5	15.2	15.9	10.5
	100.0%	99.9%	100.1%	100.1%	99.9%	99.0%	99.9%	100.0%

Chi-Square (12 df) = 31.81 Chi-Square (12 df) = 14.41

Prob. less than .01 Prob. Not Significant

From Table VII-19 it can be seen that among the small family mothers those who had widely spaced children were more heavily involved in school organizations. While 26 percent of the mothers with children spaced more than three years apart were very or extremely active in school organizations, only about half as many, 12.5 percent of the mothers with children spaced less than a year and a half apart were so involved. There was no significant association and no visible trend among the large family mothers.

Table VII-20

Mothers' Attendance at Classes and Lectures by Median Child Spacing, Controlled on Family Size

	Family Size							
Mothers' Attendance at Classes and Lectures	Small Median Spacing				Large Median Spacing			
	0-18 (N=24)	19-27 (N=46)	28-36 (N=61)	37 up (N=127)	0-18 (N=52)	19-27 (N=138)	28-36 (N=69)	37 up (N=19)
Once a Week or More	12.5%	21.7%	11.5%	35.4%	7.7%	28.3%	17.4%	10.5%
Six to 20 Times per Year	33.3	15.2	27.9	20.5	25.0	18.8	20.2	21.1
One to 5 Times per Year	4.2	21.7	21.3	15.0	13.5	15.2	23.2	26.3
Not This Year	50.0	41.3	39.3	29.1	53.8	37.7	39.1	42.1
	100.0%	99.9%	100.0%	100.0%	100.0%	100.0%	99.9%	100.0%
	Chi-Square (9 df) = 28.32 Prob. less than .01				Chi-Square (9 df) = 16.03 Prob. less than .10			

The association between child spacing and mothers' attendance at lectures and classes (see Table VII-20) indicates that the wider the spacing, the greater is the mothers' frequency of attendance at these functions. This trend is significant beyond the .01 level for the small family mothers and at the .10 level for the large family mothers. While half of the small family mothers with closely spaced children had not attended any lectures or classes in the year, only 29 percent of the mothers of the most distantly spaced small families had not attended any of these functions. On the other hand some 35 percent of mothers of the most distantly spaced small families attended classes or lectures every week while only 12.5 percent of the less distantly spaced mothers were so active.

From these two analyses it can be concluded that for a small family mother the spacing of her children affects her likelihood of attending classes or lectures and her involvement in school organizations. The larger the spacing between their children, the more active these mothers were in these leisure time activities.

Summarizing these effects on mothers' leisure time activities, it has been found that for both large and small families the mothers' involvement in outside activities was affected by their working status and by the age of their youngest child. In both family sizes, mothers who do not work spent more time volunteering than did those who work. Large family mothers whose youngest child was between seven and ten spent the most time volunteering.

Small family women who have a youngest child under ten and have larger spacing of their children were the most involved in the school organizations and in taking classes or attending lectures themselves. Small family mothers who worked full-time were more involved with active sports than were other mothers who did not work or who only worked part-time.

F. Fathers' Leisure Time Activities With Family

In this section the leisure time activities of the husbands are related to the work status of the wives by family size. Similarly the leisure time activities of the husband were related to the age of the couple's youngest child. The effect of median spacing was also examined on the leisure time activities of the husbands.

Involvement of Husbands with Hobbies - Controlling for family size the involvement of husbands with hobbies by the working status of the wife was examined. The data are presented in Table VII-21.

Table VII-21

Husbands' Involvement with Hobbies by Wives' Work Status, Controlled on Family Size

Family Size

Husbands' Involvement with Hobbies	Small			Large		
	Full-Time Work (N=52)	Occasional Work (N=64)	No Work (N=73)	Full-Time Work (N=39)	Occasional Work (N=30)	No Work (N=124)
Once a Week or More	23.1%	29.7%	34.2%	25.6%	30.0%	14.5%
Once Every 2 or 3 Weeks	15.4	15.6	11.0	28.2	10.0	4.0
Six to 12 Times per Year	13.5	10.9	16.4	10.3	10.0	16.1
One to 5 Times per Year	15.4	12.5	15.1	15.4	23.3	21.0
Not This Year	32.7	31.3	23.3	20.5	26.7	44.4
	100.1%	100.0%	100.0%	100.0%	100.0%	100.0%
	Chi-Square (8 df) = 4.11			Chi-Square (8 df) = 29.04		
	Prob. Not Significant			Prob. less than .001		

An interesting finding appears in Table VII-21. The more involved a woman was in full-time work, at least among the large families, the more active her husband was in his hobbies. While some 26 percent of the men whose wives worked full-time participated in a hobby every week, only about 14 percent of men whose wives did not work at all were so involved with hobbies. At the other end of the scale, among these large families, some 20 percent of the men with full-time working wives were not at all involved with a hobby while some 44 percent of the men whose wives did not work did not have a hobby. Among these large family men, having a working wife was strongly associated with being heavily involved with some hobby.

The effect for the small families was not significant and the non-significant trend is actually in the opposite direction.

The husbands' activities with a hobby were next examined in relation to the age of the family's youngest child. These data are given in Table VII-22.

From this table it can be seen that age of youngest child does affect the extent to which the father is involved with his hobbies, but only for the two-child fathers. The direction is such that fathers with younger children were more likely to be involved with hobbies. While some 42 percent of the fathers with a child ten or younger were active with a hobby once a week or more, only 27 percent of the fathers with both children older than ten were so active with their hobbies.

Here the effect for large families was not significant and trended in the opposite direction.

Table VII-22

Husbands' Involvement with Hobbies by Age of Youngest Child, Controlled on Family Size

Frequency of Involvement in Hobbies by Husband	Family Size: Small Child 10 or Younger (N = 33)	Small Child Over 10 (N = 157)	Large Child 6 or Younger (N = 86)	Large Child 7 to 10 (N = 65)	Large Child Over 10 (N = 42)
Once a Week or More	42.4%	26.8%	17.4%	18.5%	23.8%
Once Every 2 or 3 Weeks	21.2	12.1	8.1	7.7	16.7
Six to 12 Times per Year	18.2	12.7	14.0	15.4	11.9
One to 5 Times per Year	3.0	16.6	22.1	18.5	19.0
Not This Year	15.2	31.8	38.4	40.0	28.6
	100.0	100.0	100.0	100.1	100.0

Chi-Square (4 df) = 10.66 Chi-Square (8 df) = 4.68

Probability less than .05 Probability Not Significant

When the extent of the husbands' involvement with hobbies was examined with respect to the median spacing between children, there was found to be a significant relationship among the large family fathers. As can be seen in Table VII-23, large family fathers who had widely spaced children were less involved in hobbies than were men who had more compact families. The effect was strongest among men who had their children spaced an average of more than 36 months apart. Among large-family fathers whose children had a median spacing of 18 months or less, about one in four did not have any hobby at all. On the other hand, among fathers with the widest spacings, about three in four were not at all involved in hobbies.

Table VII-23

Husbands' Involvement with Hobbies by Median Spacing of Children, Controlled on Family Size

Frequency of Involvement In Hobbies	Family Size							
	Small				Large			
	Median Spacing in Months				Median Spacing in Months			
	0-18 (N=16)	19-27 (N=33)	28-36 (N=44)	37 or More (N=97)	0-18 (N=30)	19-27 (N=96)	28-36 (N=55)	37 or More (N=12)
Once Every 2 or 3 Weeks or More Often	37.5%	39.4%	43.2%	45.4%	23.3%	32.3%	32.7%	0.0%
Six to 12 Times per Year	6.3	18.2	11.4	14.4	23.3	10.4	12.7	25.0
One to 5 Times per Year	25.0	18.2	20.5	8.2	26.7	18.8	23.6	0.0
Not This Year	31.3	24.2	25.0	32.0	26.7	38.5	30.9	75.0
	100.1%	100.0%	100.1%	100.0%	100.0%	100.0%	99.9%	100.0%
	Chi-Square (9 df) = 7.82				Chi-Square (9 df) = 17.94			
	Probability Not Significant				Probability less than .05			

Swimming, Boating, and Picnicking-

The next leisure time activity examined was the frequency with which a husband was involved in Swimming, Boating, and Picnicking. The results are presented in Table VII-24 for contrasting wives' work status and in Table VII-25 for age of youngest child. A very interesting result appears in Table VII-24. Women who were working full-time had husbands who were less involved with swimming and similar activities than did women who were not working, among the small-family mothers. However among the large family mothers, the women who work part-time had the least active husbands. Thus for both family sizes, the women who did not work at all had husbands who were more active in their swimming, boating, and picnicking but there was a difference as to whether it was the full-time or the part-time working mothers which had the least active husbands in these activities. The relationships were significant for both family sizes. The best conclusion to be made is that women who did not work, had husbands who went swimming and engaged in similar activities more frequently than the husbands of working women.

Table VII-24

Husbands' Involvement with Swimming, Boating, and Picnicking by Wives' Work Status, Controlled on Family Size

Frequency of Husbands' Involvement with Swimming, Boating, and Picnicking	Family Size					
	Small			Large		
	Full-Time Work (N=70)	Occasional Work (N=88)	No Work (N=98)	Full-Time Work (N=52)	Occasional Work (N=48)	No Work (N=176)
Once a Week or More	17.1%	35.2%	36.7%	34.6%	27.1%	33.5%
Once Every 2 or 3 Weeks	30.0	25.0	17.3	19.2	10.4	30.1
Six to 12 Times/Year	28.6	17.0	23.5	30.8	27.1	22.7
One to 5 Times/Year	17.1	10.2	18.4	9.6	25.0	8.5
Not This Year	7.1	12.5	4.1	5.8	10.4	5.1
	99.9%	99.9%	100.0%	100.0%	100.0%	99.9%
	Chi-Square (8 df) = 17.68			Chi-Square (8 df) = 19.18		
	Probability less than .05			Probability less than .05		

Looking next at the effect of the age of the youngest child on this particular aspect of the mens' recreation, we find that among the small family fathers it is the ones with somewhat older children who were less involved in swimming and boating. As can be seen in Table VII-25, while only about seven percent of the small family fathers with children under ten were not involved with swimming, boating and picnicking at least six times a year, one out of four of the small family fathers whose youngest child was over ten were so seldom involved with these activities. The pattern was the same for the large family fathers but failed to reach a significant level.

Table VII-25

Husbands' Involvement with Swimming, Boating, and Picnicking by Age of Youngest Child, Controlled on Family Size

Fathers' Involvement in Swimming, Boating or Picnicking	Family Size: Small		Large		
	Child 10 or Younger (N=45)	Child Over 10 (N=211)	Child 6 or Younger (N=117)	Child 7 to 10 (N=102)	Child Over 10 (N=57)
Once a Week or More Often	31.1%	30.8%	38.5%	31.4%	22.8%
Once Every 2 or 3 Weeks	35.6	20.9	27.4	23.5	21.1
Six to 12 Times per Year	26.7	21.8	23.9	22.5	31.6
One to 5 Times per Year	2.2	18.0	6.8	14.7	15.8
Not This Year	4.4	8.5	3.4	7.8	8.8
	Chi-Square (4 df) = 10.67 Probability less than .05		Chi-Square (8 df) = 11.47 Probability Not Significant		

With respect to swimming and similar activities then, it was found that the men with wives who were not working and with relatively young children were more involved than were men with older children or with working wives.

Reading - The amount of time a husband spent reading during his leisure time was next examined. As reported in Table VII-26, there was a significant association between time spent reading and the median spacing between children for the small family fathers.

Table VII-26

Husbands' Time Spent Reading by Median Spacing, Controlled on Family Size

Hours per Week Spent Reading by Husbands	Small Families Median Spacing in Months 0-18 (N=22)	19-27 (N=42)	28-36 (N=54)	37 or More (N=118)	Large Families Median Spacing in Months 0-18 (N=50)	19-27 (N=129)	28-36 (N=65)	37 or More (N=19)
Zero to Four	22.7%	9.5%	37.0%	28.0%	20.0%	26.4%	20.0%	15.8%
Five to Nine	13.6	38.1	25.9	22.9	28.0	32.6	33.8	47.4
Ten to 14	40.9	26.2	13.0	26.3	28.0	26.4	18.5	31.6
15 or More	22.7	26.2	24.1	22.9	24.0	14.7	27.7	5.3
	99.9%	100.0%	100.0%	100.1%	100.0%	100.1%	100.0%	100.1%
	Chi-Square (9 df) = 16.95				Chi-Square (9 df) = 11.18			
	Probability Less Than .05				Probability Not Significant			

The direction of the effect is such that the fathers with closely spaced families were able to spend more time reading. The direction of the effect was the same in both family sizes but was significant only in the small families. Given that a father had only two children, at least one of whom was a teenager, when the children were 18 months or less apart, some 63 percent of these fathers spent ten or more hours per week reading. However when a fathers' two children were more than three years apart, only 50 percent could spend ten or more hours per week reading.

Fishing, Hunting, Camping, and Skiing

Among the small-family fathers there was a significant relationship between participation in fishing, hunting, camping and skiing and the age of the youngest child. As seen in Table VII-27, those fathers who had children under ten years old were more likely to be involved in these outdoor sports than were fathers with only older children.

Table VII-27

Fathers' Involvement with Fishing, Hunting, Camping, or Skiing by Age of Youngest Child, Controlled on Family Size

Frequency of Fathers' Involvement in Outdoor Sports	Small Family		Large Family		
	Child 10 or Younger (N=34)	Child Over 10 (N=158)	Child 6 or Less (N=87)	Child 7 to 10 (N=68)	Child Over 10 (N=42)
Six to 12 Times per Year or More Often	20.6%	21.5%	28.7%	27.9%	14.3%
One to 5 Times per Year	47.1	21.5	36.8	32.4	38.1
Not This Year	32.4	57.0	34.5	39.7	47.6
	100.1%	100.0%	100.0%	100.0%	100.0%
	Chi-Square (2 df) = 10.24		Chi-Square (4 df) = 4.17		
	Probability less than .01		Probability Not Significant		

Among the small family fathers some 57 percent of those with all children over ten were not at all involved in these outdoor sports, while only 32 percent of those with a child under ten were so uninvolved. Among the large-family fathers the direction of effect was the same but the trend was not statistically significant.

Attendance at Sporting Events -

The fathers' attendance at sporting events was also related to the age of the youngest child. There was a strong association, significant beyond the .001 level, between age of youngest child and attendance at sporting events among the large family fathers. Table VII-28 presents the data.

Table VII-28

Fathers' Attendance at Sports Events by Age of Youngest Child, Controlled on Family Size

Frequency of Fathers' Attendance at Sports Events	Small Family		Large Family		
	Child 10 or Younger (N=34)	Child Over 10 (N=160)	Child 6 or Less (N=88)	Child 7 to 10 (N=69)	Child Over 10 (N=43)
Once Every 2 or 3 Weeks or More Often	2.9%	16.3%	11.4%	36.2%	4.7%
Six to 12 Times per Year	17.6	27.5	36.4	26.1	25.6
One to 5 Times per Year	61.8	40.6	47.7	29.0	44.2
Not This Year	17.6	15.6	4.5	8.7	25.6
	99.9%	100.0%	100.0%	100.0%	100.1%
	Chi-Square (3 df) = 7.52		Chi-Square (6 df) = 36.42		
	Probability Less Than .10		Probability Less Than .001		

The effect among the large family fathers was for the fathers with all of their children over ten to be less involved in attending sporting events while fathers with younger children were far more involved in such attendance. In particular, fathers with their youngest child between seven and ten were very active in attending sports events. Among fathers of large families who had all their children over ten less than five percent were attending sports events more than once a month while those with children in the seven to ten age range had 36 percent attending sports events that often. Among the small families there was a trend which was almost significant (less than .10) but it was in the opposite direction with the fathers with both children over ten more likely to be involved in attending sports events.

In summary, the small family fathers with children under ten spent more time with hobbies, more time swimming, picnicking, fishing, boating, hunting, camping, and skiing than did fathers with older children. When the wives of the small family husbands did not work, the men spent more time boating, swimming and picnicking than when the wives were working. Small family fathers whose children were closely spaced spent more time reading than did the fathers of the widely spaced children.

Large family fathers whose youngest child was between seven and ten spent more time attending sporting events than large family fathers with other ages for their youngest child. In these large families, if the wife worked, the husband spent more time on his hobbies but less time on swimming, boating and picnicking than in those families where the wife did not work. The more closely spaced were these large families, the more time the husband spent on his hobbies.

G. Fathers' Leisure Time Activities Without the Family

In this section a set of leisure time activities which generally drew the father out of the home without the corresponding involvement of the rest of the family are examined. These activities are participation in active sports, in professional or business associations, attendance at concerts, involvement in school organizations, and helping friends and relatives.

Active Sports -

The extent to which the husbands were involved with active sports was related to the work status of the wives among the large families. The data are presented in Table VII-29.

Table VII-29

Husbands' Participation in Active Sports by Wives' Work Status Controlled on Family Size

Frequency of Husbands Participation in Active Sports	Small Families			Large Families		
	Full-Time Work (N=70)	Occasional Work (N=88)	No Work (N=98)	Full-Time Work (N=52)	Occasional Work (N=48)	No Work (N=177)
Once a Week or More	35.7%	22.7%	33.7%	28.8%	39.6%	44.1%
Once Every 2 or 3 Weeks	1.4	13.6	8.2	7.7	8.3	14.1
Six to 12 Times per Year	14.3	15.9	9.2	9.6	8.3	10.7
One to 5 Times per Year	12.9	9.1	12.2	11.5	20.8	9.0
Not This Year	35.7	38.6	36.7	42.3	22.9	22.0
	Chi-Square (8 df) = 12.25			Chi-Square (8 df) = 15.68		
	Probability Not Significant			Probability Less Than .05		

There was no significant effect among the small families but among the large families, the less the wife worked, the more likely the husband was to be active in sports. Among the men with working wives who held full-time jobs, some 42 percent were not at all active in sports themselves. In contrast only 22 percent of the men with non-working wives did not participate at all in active sports. Similarly some 58 percent of the men with non-working wives were active in sports at least once every two or three weeks while only about 36 percent of the men with full-time working wives were this active.

Business and Professional Associations -

The working status of the wives was also significantly related to the extent to which a husband was involved actively in professional and business organizations. For both family sizes, when the wives were working, the husbands were less active in such organizations. The data are presented in Table VII-30.

Table VII-30

Husbands' Activity in Business or Professional Organizations by Wives' Work Status, Controlled on Family Size

Activity Level	Small Family			Large Family		
of Husbands in Business or Professional Orgs.	Full-Time Work (N=69)	Occasional Work (N=89)	No Work (N=97)	Full-Time Work (N=52)	Occasional Work (N=49)	No Work (N=178)
Extremely Active	2.9%	5.6%	11.3%	5.8%	6.1%	6.7%
Very Active	4.3	10.1	12.4	9.6	2.0	13.5
Fairly Active	14.5	18.0	24.7	30.8	16.3	25.8
Not Very Active	20.3	29.2	16.5	15.4	12.2	20.8
Rarely Active	15.9	10.1	15.5	7.7	22.4	4.5
Not a Member	42.0	27.0	19.6	30.8	40.8	28.7
	99.9%	100.0%	100.0%	100.1%	99.8%	100.0%
	Chi-Square (10 df) = 21.76			Chi-Square (10 df) = 25.73		
	Probability Less Than .05			Probability Less Than .01		

Among the small families, when the wife was working full-time only about three percent of the husbands were extremely active in a business or professional organization while 68 percent were not members or were rarely active. Among the small families where the wife did not work, some eleven percent of the husbands were extremely active and only 35 percent were either not members or were only rarely active in professional and business organizations.

Similarly among the large families, where the wife was working full-time some 5.8 percent of the husbands were extremely active and some 38 percent were not members or were rarely active as contrasted to 6.7 percent extremely active and 33 percent not members or rarely active among the non-working wives' families. However among the large families, the major effect was on the husbands of the women who were working only part-time or occasionally. Among husbands of these women some 63 percent were not members or were rarely active in business and professional associations. Almost all of the significance of the work-status effect among the large families was due to the husbands of women who were working part-time or occasionally.

The activity of husbands in business or professional associations was also significantly related to the spacing of the children in the family. Table VII-31 presents these findings.

In general, for the large families, the wider the spacing between the children, the less active the husband was in such business or professional organizations. Among the large families with median spacing less than 18 months, some 38 percent of the men were not members or were rarely active in such organizations while among men with median inter-child spacings of more than three years some 52 percent were not members or were rarely active if they were members. On the other hand while some 17 percent of the men with very short spacings were very or extremely active, none of the men with spacings averaging more than three years were so active.

Table VII-31

Husbands' Involvement With Business or Professional Organizations

By Median Child Spacing, Controlled on Family Size

Degree of Husbands' Involvement	Small Family				Large Family			
	0-18 Months (N=24)	19-27 Months (N=46)	28-36 Months (N=60)	37 or More Months (N=126)	0-18 Months (N=53)	19-27 Months (N=138)	28-36 Months (N=69)	37 or More Months (N=19)
Very or Extremely Active	20.8%	17.4%	15.0%	15.9%	17.0%	16.7%	32.2%	0.0%
Fairly Active	8.3	19.6	18.3	23.0	35.8	19.6	23.2	42.1
Not Active	12.5	21.7	25.0	22.2	9.4	21.0	23.2	5.3
Rarely Active	37.5	8.7	13.3	11.1	3.8	10.1	5.8	15.8
Not A Member	20.8	32.6	28.3	27.8	34.0	32.6	24.6	36.8
	Chi-Square (12 df) = 16.15				Chi-Square (12 df) = 21.72			
	Probability Not Significant				Probability Less Than .05			

Activity in School Organizations -

The median spacing between children was also significantly related to the extent to which the fathers were involved in school organizations among the small families. The form of the relationship is not simple however. Families where the children were spaced between 28 and 36 months apart had husbands which were most active in school organizations. More widely spaced and more closely spaced families had less active fathers.

Among the large families there was no significant relationship and no visible trend. These data are presented in Table VII-32.

Table VII-32

Fathers' Involvement in School Organizations by Spacing of Children, Controlled on Family Size

Degree of Involvement of Father	Small Families				Large Families			
	0-18 Months (N=24)	19-27 Months (N=46)	28-36 Months (N=60)	37 or More Months (N=127)	0-18 Months (N=53)	19-27 Months (N=137)	28-36 Months (N=69)	37 or More Months (N=19)
Fairly to Extremely Active	20.8%	13.1%	30.0%	13.4%	20.7%	22.6%	23.2%	15.8%
Not Active	8.3	34.8	18.3	18.1	22.6	17.5	13.0	21.1
Rarely Active	33.3	13.1	18.3	29.1	22.6	19.0	20.3	21.1
Not A Member	37.5	39.1	33.3	39.4	34.0	40.9	43.5	42.1
	99.9%	100.1%	99.9%	100.0%	99.9%	100.0%	100.0%	100.1%

Small Families: Chi-Square (9 df) = 19.72; Probability Less Than .05

Large Families: Chi-Square (9 df) = 3.14; Probability Not Significant

Attendance at Concerts

The husbands' attendance at concerts was significantly associated with the age of the youngest child among the large families. When the youngest child was older, the father was much more likely to attend concerts. The data are presented in Table VII-33.

While only about three percent of the fathers of large families who had a child under six were able to attend concerts frequently, some 18 percent of those fathers whose youngest child was over ten did so.

Among the small families the trend was almost significant (.10 level) but the direction was the opposite, with the men with older children more likely not to attend concerts at all.

Table VII-33

Fathers' Attendance at Concerts by Age of Youngest Child, Controlled on Family Size

Frequency of Attendance at Concerts	Small Families		Large Families		
	Child 10 or Younger (N=45)	Child Over 10 (N=210)	Child 6 or Younger (N=115)	Child 7 to 10 (N=87)	Child Over 10 (N=57)
Once Every 2 or 3 weeks or more often	6.7%	9.0%	2.6%	6.9%	17.5%
Six to 12 Times per year	26.7	25.7	20.5	19.6	24.6
One to 5 Times per year	57.8	41.4	51.3	39.2	43.9
Not This Year	8.9	23.8	25.6	34.3	14.0
	100.1%	99.9%	100.0%	100.0%	100.0%

Chi-Square (3 df) = 6.39 Chi-Square (6 df) = 19.87

Probability less than .10 Probability less than .01

Helping Relatives and Friends

There was a significant association between the extent to which husbands helped their relatives and friends and the work status of their wives among the large families. This data is given in Table VII-34.

In general women who were working had husbands who were spending less time helping their relatives and friends. While some 40 percent of the husbands of women who were working full-time among the large families were not able to help their relatives or friends more than a few times a year if at all, only

27 percent of the husbands of women who were not working were able to help so little. At the other end of the scale, 21 percent of the full-time working wives' husbands were helping once a week or more often while some 30 percent of the husbands of women who did not work were helping their relatives and friends at least once a week.

Table VII-34

Husbands' Involvement with Helping Relatives and Friends by Wives' Work Status, Controlled on Family Size

Frequency of Husband's Involvement	Small Family			Large Family		
	Full-Time Work (N=70)	Occasional Work (N=88)	No Work (N=98)	Full-Time Work (N=52)	Occasional Work (N=48)	No Work (N=176)
Once a Week or More	27.1%	25.0%	33.7%	21.2%	20.8%	29.5%
Once Every 2 or 3 Weeks	17.1	20.5	19.4	15.4	22.9	21.0
Six to 12 Times per Year	20.0	21.6	16.3	23.1	20.8	22.7
One to 5 Times per Year	28.6	23.9	17.3	36.5	14.6	19.3
Not This Year	7.1	9.1	13.3	3.8	20.8	7.4
	99.9%	100.1%	100.0%	100.0%	99.9%	99.9%

Chi-Square (8 df) = 6.26 Chi-Square (8 df) = 18.95

Probability Not Significant Probability Less Than .05

In summary, among the small families, when the wives did not work, the husbands were more involved in business and professional organizations. The small family fathers whose children were spaced between 28 and 36 months were more active in school organizations, than those of closer or more distant spacing.

For large families where the wives did not work, the husbands more actively participated in sports, in business and professional associations.

and in helping friends and relatives. Those large family husbands with closely spaced children were more active in business and professional organizations. The large family fathers with no young children attended concerts more frequently.

H. Conclusions and Discussion

This chapter has indicated that family size per se was not as important in patterning the leisure time activities of the parents as had been thought. However there were family size effects and there were also effects from the spacing of children, the age of the youngest child, and of the mothers' work status.

In general it seems that when the wife is working outside the home this affects the leisure time activities of the husband in the direction of keeping him closer to home. He is less likely to be active in professional or business associations and less likely to be involved in active participation in sports. Exactly the contrary effect seems to occur for the women. The working women are far more likely to be active in business or professional activities and also in active sports than are the women who do not work. On the other hand stay-at-home activities are more prevalent among women who do not work, and among men whose wives do work. As might be expected, the major effect of the women working is to make the roles and activities of the two spouses more similar and less sex-specific.

Spacing seems in general to affect some of the at home activities such as reading and working on hobbies. The fathers with the more compact families were able to spend more time reading and working on hobbies than were the fathers with more spread out in age families. What may be going on here is that with children of very different ages, the father may find that at least one child wants his attention while with children of similar ages they may be more likely to play with each other.

There seem to be patterns of leisure time activities which are specific to the ages of the children. Parents with children in the seven to ten age range seem to spend more time attending sports events while parents with children under ten seem to spend more time swimming, boating and picnicking. On the other hand parents with older children are more likely to be able to attend cultural events such as concerts more frequently.

VIII FAMILY SIZE EFFECTS ON CHILDREN

Suburban Boston Sample

This chapter deals with the question of "How do children from large and from small families differ?"

A. Academic Achievement and Family Size

It was predicted that the academic achievement of the small family child would average higher than that of the large-family child as indicated by his grade point average. This relationship of family size to academic achievement was expected to hold even after controlling for socio-economic status.

Literature Review - Children from smaller families show higher achievement motivation and academic achievement than children from larger families (Elder, 1962; Rosen, 1961; Solomon, Hirsch, Scheinfeld and Jackson, 1972; and Sterle, 1970). Using a Slovenian sample of elementary school children who dropped out of school when they were eight years old, with a comparable group of elementary school graduates matched on intelligence and age, Sterle (1970) found that the drop-outs were more often from incomplete or larger families. However since he did not control for social class, the true nature of his findings is unclear.

Grade-Point Average by Family Size - In the present study grade-point average was taken as the measure of academic achievement and the sex and religion of the child were controlled, while examining the effect of family size. The results are presented in Table VIII-1 for all of the children. This table shows a significant association between family size and grade point average with the small family children doing better in school.

Table VIII-1

Grade Point Average by Family Size - All Children

Grade Point Average on a 100 Pt. Scale	Family Size Small (N = 247)	Large (N = 305)
Below 80	8.1%	12.8%
80 to 85	22.7	29.2
86 to 90	41.3	42.3
Over 90	27.9	15.7
	100.0%	100.0%

Chi-Square (3 df) = 14.62

Probability less than .01

As indicated in the table, the small family children were about twice as likely as the large family children to reach the highest levels of achievement. When this data was broken down by religion and by sex, the effect of family size was significant at the .05 level for Catholic Girls and at the .10 level for Non-Catholic Boys.

It can then be concluded that family size does have an effect on academic achievement with the small family children doing better academically. In this sample the main effect was at the very highest levels of achievement and was especially strong for Catholic Girls.

B. Marriage Plans and Family Size

It was expected that the small family child, in contrast to the large family child would in general plan to have fewer children himself. It was also predicted that the small family children would be more likely to plan to control the number of children they have rather than to have as many as God might send. The large family child was expected to plan to have a larger family himself and to be more likely to leave the decision on how many children to eventually have up to God.

Further, it was expected that sibling order would interact with the family size effect in that the oldest children in large families would be more likely to plan their families and to expect to have fewer offspring than would other siblings in large families.

It was expected that the large family child would expect to get married somewhat earlier than the small family child. It was expected that at the highest income levels there would be a tendency for the large family child to expect to marry somewhat later than the small family child of similar status.

Literature Review - Bossard and Boll (1956) found that persons reared in large families did not tend to rear large families themselves. However later studies have reported contrary findings (Barger and Hall, 1966; Duncan, Freedman, Coble and Slesinger, 1965; Hendershot, 1969; and Westoff and Potvin, 1967). These studies indicated that those who came from large families tended to produce large families themselves or to have preferences for larger families. The discrepancy in the findings of these studies could be due to the nature of their samples. Duncan *et al*. and Westoff and Potvin used larger and more representative samples while Bossard and Boll used a selected sample consisting only of large families, Hendershot (1969) also found that the relationship between family of orientation and family size preference was greater among women who felt "close" to their families of orientation and among those who were first born children.

Parents who were only children tended to divorce more (Barger and Hall, 1966). Mothers from two-child families also had a higher than expected divorce rate while those from families of four or more children had a relatively low rate.

Age at Marriage - In this sample it was found that the age at which the children expected to marry did not vary significantly by family size. The mean age at which the children expected to marry was 23.3 for the small family girls and 23.8 for the large family girls. It was 25.0 for the small family boys and 24.8 for the large family boys.

Many of the children had not thought about when they would marry. Some 38 percent of the small family boys and 33 percent of the large family boys, 23 percent of the small family girls and 14 percent of the large family girls had not thought about when they would marry. These percents did not differ significantly by family size for the boys but did differ at the .05 level for the girls. Large family girls were more likely than small family girls to have thought about when they would marry.

Expected size of Family - The children were asked how many children they expected to have when they started their own families. There was a strong association between family size and the number of children expected with the large family children expecting to have more children themselves. This relationship was significant beyond the .001 level and the gamma coeficient was .39. In terms of the number of children expected, the small family boys expected an average of 2.33 children while the large family boys expected 2.96 children on the average. For the girls, the expectation was 2.69 for the small family girls and 3.23 for the large family girls. When the relationship was further examined within religious groupings, the effect of family size was found to be in the same direction for both Catholics and for Non-Catholics, with the larger family children themselves planning to have more children. These results are presented in Table VIII-2. In all of these analyses those children who said that they would have as many children as God Might Send were omitted from the analysis. The percentages of children in each category who expected to leave the number of children they would have up to God are indicated in Table VIII-3.

Table VIII-2

Mean Number of Children Expected by Family Size Controlled on Religion and Sex

Group	Family Size		
	Small	Large	t-test Significance Level
Boys	2.33	2.96	.001
Catholic Boys	2.45	3.20	.001
Non-Cath. Boys	2.28	2.39	N.S.
Girls	2.69	3.23	.001
Catholic Girls	2.59	3.37	.02
Non-Cath. Girls	2.61	2.93	N.S.
All Children	2.56	3.12	.001

The large family children seemed to plan to have about half a child more themselves than did the small family children. However, the effect of family size was only significant for the Catholic Boys and the Catholic Girls and was not significant, though the effect was in the same direction, for the Non-Catholic Boys and Girls.

Table VIII-3

Percent of Children Saying They Will Have As Many Children as God Might Send

Group	Family Size			
	Small	Large	Chi-Square (1 df)	Significance
Boys	6.7%	5.2%	0.42	N.S.
Catholic Boys	20.0%	15.9%	6.06	.02
Non-Cath. Boys	0.0%	3.4%	11.70	.01
Girls	5.3%	12.5%	5.31	.05
Catholic Girls	10.3%	15.6%	0.74	N.S.
Non-Cath. Girls	3.9%	4.7%	0.07	N.S.
All Children	5.8%	9.6%	4.65	.05

In Table VIII-3 the percentages of children who did not give a number of children they expected to have in their families of generation but rather said that they would have as many children as God might send are presented. In general the Catholic children of both sexes were far more likely to give this response than were the Non-Catholic children. The family size effect was significant in every religion by sex group and in three of these groups the direction of effect was that the large family children were more likely to leave to God the number of children they would eventually have. However in one group, Catholic Boys, the significant effect was in the opposite direction. While some 16 percent of the large family Catholic boys would rely on God to make this decision, a full 20 percent of the small family Catholic boys would.

Taking these two tables together, it can be said that the general effect of coming from a large family was to expect to have a larger family yourself. This is manifested in both expecting a larger number of children (3.12 vs. 2.56) and being more likely to leave the decision on family size to God (9.6% to 5.8%) if you come from a large rather than a small family yourself. However it is also important to note that these differences are not as large as the differences in family size of the children's families of origin. While all of the large family children came from families with five or more children, the mean number of children they expected to have was only 3.12. On the other hand the mean number of children wanted by children coming from the two-child families was 2.56.

C. Spacing of Children by Family Size

Two issues of spacing were examined. One was how soon after marriage the children expected to have their first child. The second was how soon after the birth of the first child would they expect to have a second child born. These results are presented in Table VIII-4 and in Table VIII-5 respectively.

From Table VIII-4 it can be seen that there was a significant tendency (at the .05 level)for children from larger families to expect to have a shorter interval between marriage and the birth of the first child (about 1.7 months shorter). When this analysis is examined taking into account the sex and religious background of the child the effect is

Table VIII-4

Mean Number of Months After Marriage First Child is Expected by Family Size, Controlled on Religion and Sex of Child

Group	Family Size Small	 Large	Mean Diff. Small - Large	t-Test Significance
Boys	17.99	17.05	.94	N.S.
Catholic Boys	17.15	16.88	.27	N.S.
Non-Cath. Boys	18.36	17.54	.82	N.S.
Girls	21.21	19.53	1.68	N.S.
Catholic Girls	20.06	17.74	2.32	N.S.
Non-Cath. Girls	21.93	24.32	-2.34	N.S.
All Children	20.11	18.40	1.71	.05

in the direction of larger families having children who expect a shorter time period between marriage and birth of first child except for the Non-Catholic girls, where the non-significant trend is in the opposite direction.

In Table VIII-5 are presented the data on expected spacing between the first two children by family size of origin of the teenage respondents and by religious background. There was a powerful family size effect with the small family children expecting to have a much longer interval between the first and second child than do the teenagers coming from large families.

Table VIII-5

Mean Number of Months Between First and Second Child Expected by Teenagers Coming From Small and Large Families by Sex and Religious Background

Groups	Family Size		Mean Diff.	t-Test
	Small	Large	Small - Large	Significance
Boys	22.47	20.27	2.20	N.S.
Catholic	21.60	20.00	1.60	N.S.
Non-Catholic	22.88	20.94	1.94	N.S.
Girls	26.53	19.40	7.13	.001
Catholic	21.58	19.40	2.18	N.S.
Non-Catholic	27.90	19.41	8.49	.001
All Children	24.91	19.80	5.11	.001

The effect of family size on the expected time between the first and second births, while significant for all children, was due to a very strong effect among the girls, especially the Non-Catholic girls. On the average the small family teenagers expected that there would be about 25 months between the birth of the first and second child while the large family teenagers expected about 20 months. However for the girls the difference was about seven months while it was only about two months for the boys. There was no significant family size effect for the boys while the effect for the girls was highly significant.

These two tables indicate that the size of the family in which a child grows up does affect the child spacing expectations which he or she has for his or her own family of procreation. Teenagers growing up in small families tend to expect larger spacing between marriage and first child and between the first and second child. The effects of family size on expected spacing are greater on the spacing between the first and second child than they are on the marriage to first child spacing.

On the average, the large family teenager expects to have his or her first child about 18 months after marriage and the second child some 20 months later while on the average the small family teenager expects to have his or her first child some 20 months after marriage and the second child 25 months later. Neither of these family size by spacing effects were significant for the boys examined alone. While the effects were in the same direction for boys as for girls, the family size effects on spacing expectations were much stronger for girls. What may be going on here is that girls have given considerably more thought to not only the number of their children, but also to their spacing than have the boys. Thus background effects, such as the number of brothers and sisters they have, would have affected the girls' thinking but have not yet affected the boys' thinking.

D. Expected Family Composition by Family Size

The teenagers were asked what kind of family they would like to have when they married. The response alternatives were "All girls", "More girls than boys", "An equal number of each", "More boys than girls", "All boys", and "No children". Some of the teenagers wrote in "Makes no difference" and this category was included in the analysis. Very few of the teenagers specified no children, all girls, or all boys.

Table VIII-6 presents the data. For the boys, there was a family size effect, with the large family boys wanting to have families of their own with a greater proportion of boys. Among the small family boys three out of four wanted to have an equal number of children of each sex, while only half of the large family boys wanted an equal number of each. While 24 percent of the small family boys wanted more boys than girls, some 44 percent of the large family boys wanted more boys than girls.

Among the girls, there was no significant preference for more children of one sex or the other by family size. However the non-significant trend (significant at the .10 level) was for the small family girls to prefer slightly more boys in their families of procreation than did the large family girls. This is indicated by the signs and magnitudes of the gamma coefficients. For the boys, the gamma was +.36 indicating that there was a considerably greater preference for boys among the large family boys while among girls the gamma coefficient was -.13 indicating that it was the small family girls rather than the large family girls who had the greater preference for boys in their families of procreation.

Table VIII-6

Desired Family Composition by Size of Family of Origin

Controlled on Sex

Desired Family Composition In Families of Procreation	Boys Small Families (N=104)	Boys Large Families (N=144)	Girls Small Families (N=152)	Girls Large Families (N=172)
All Girls	0.0%	1.4%	5.3%	4.1%
More Girls than Boys	1.9	1.4	5.9	12.2
As Many Girls as Boys	74.0	50.0	61.8	60.5
More Boys than Girls	12.5	34.7	17.1	19.2
All Boys	11.5	9.7	6.6	2.3
No Children	0.0	2.8	3.3	1.7
	99.9%	100.0%	100.0%	100.0%

Boys: Chi-Square (5 df) = 22.18; Probability less than .001; Gamma = .36

Girls: Chi-Square (5 df) = 8.07; Probability less than .10; Gamma = -.13

An analysis was also done comparing boys with girls, collapsing across family sizes. This Chi-Square (4 df) was 32.28 which was significant well beyond the .001 level. The results indicated that girls had a much greater preference for having families with a preponderance of girls while boys had a preference for families with a preponderance of boys. Among both sexes about sixty percent of the children wanted to have an equal number of children of each sex in their families of procreation. However, among the girls, some 14 percent wanted more girls than boys while only 2.4 percent of the boys did. On the other hand some 25 percent of the boys and only 18 percent of the girls wanted more boys than girls in their families of procreation. More girls (2.5 percent) than boys (1.6 percent) wanted to have no children.

In brief, these results indicate that 1) Most children of both sexes prefered to have families with an equal number of children of each sex; 2) Where a preponderance of one sex was desired, that sex was generally male among both boys and girls; 3) Family Size of the family of origin affected boys from large families who tended to prefer a preponderance of boys in their own families and large family girls who tend to prefer a preponderance of girls in their families of procreation; and 4) Girls were about five times as likely as boys to prefer families with a preponderance of girls.

E. Social Participation and Family Size

There are two alternate sets of predictions for the relationship between family size and social participation. On the one hand, following Bossard and Boll's (1956) argument it can be expected that children from large families have had greater opportunity for early and continous participation in groups. This should cause them to tend to belong to more organizations and to participate in them more intensively than small-family children. The opposite argument is that because the small-family children are forced to look outside the family circle for friends, they would have learned early how to relate to outsiders and to participate socially. This allows the expectation that it would be the small-family children who would tend to belong to more voluntary organizations and to participate in them more intensively.

In this section these two opposite predictions are examined with respect to the data. The areas examined are membership in athletic teams, other club memberships, the number of best friends, the number of best friends at school, participation in informal neighborhood groups,participation in church, religious and charitable groups, participation in clubs or organizations, participation in social clubs, fraternities, and sororities, and hours spent per week with the opposite sex.

Membership in Athletic Teams and Family Size

The family size effect on athletic team membership was measured by asking the children how many athletic teams or clubs they had been members of in the last three years. The response categories were zero, one, two, three, or four or more. These response categories somewhat understated the athletic involvements of those children who were so athletic that they were involved in more than four teams in the past three years.

The data are presented in terms of mean number of memberships and the family size effects in Table VIII-7. From this table it can be seen that the direction of effect for athletic team memberships was for large family children to be more involved with athletics than small family children. On the average the large family child was a member of one third more (.33) teams in the last three years than were the small family children. This family size effect for all children was significant at the .05 level.

When the relationship was further specified by sex of the child, it was found that the family size effect was significant for boys but not for girls. For boys there were .40 more athletic team memberships per child among the large family boys than there were for the small family boys.

Further specifying the relationship by religion as well as sex, the family size effect was significant only for the Catholic boys where the large family Catholic boys averaged more than half (.54) a team membership than the small family Catholic boys.

Table VIII-7

Athletic Team Memberships in the Past Three Years by Family Size, Controlled on Sex and Religion

Group	Mean Number of Athletic Memberships			t-test
	Small	Large	(large-Small)	Significance
Boys	2.52	2.91	.40	.05
Catholic Boys	2.44	2.98	.54	.05
Non-Cath. Boys	2.55	2.74	.19	N.S.
Girls	1.73	1.93	.20	N.S.
Catholic Girls	2.44	2.02	-.42	N.S.
Non-Cath. Girls	1.54	1.72	.18	N.S.
All Children	2.06	2.39	.33	.05

In brief, there was a family size effect with the large family children more involved in athletic team memberships than were the small family children. The effect was particularly strong among boys and especially among Catholic boys.

Membership in Clubs and Family Size[7]

The next social participation area examined was membership in clubs in the last three years. Again the response categories ranged from zero to four or more so that those children who were more active than four clubs in the last three years did not raise the mean of their group more than those who were only active to the extent of four clubs.

Table VIII-8

Club Membership in the Past Three Years by Family Size, Controlled on Sex and Religion

Group	Mean Number of Club Memberships			t-test
	Small	Large	(Large-Small)	Significance
Boys	2.04	1.59	-.44	.01
Catholic Boys	2.00	1.49	-.51	.10
Non-Cath. Boys	2.05	1.86	-.20	N.S.
Girls	2.08	1.89	-.19	N.S.
Catholic Girls	1.84	1.82	-.02	N.S.
Non-Cath. Girls	2.15	2.04	-.11	N.S.
All Children	2.07	1.75	-.31	.01

There was a family size effect on the number of club memberships with the small family children being more involved in clubs than the large family children. On the average the small family children were members of .31 more clubs than were the large family children over the past three years.

When the family size effect was further specified by sex, it was found to be highly significant for the boys but not for the girls, though the direction of the effect was the same in both sexes. When within each sex the effect was further specified by religion, the direction of the effect remained in favor of the small family children but none of the four groups were significant at the .05 level.

In conclusion then, there was a family size effect for club memberships and the direction was for the small family children to be more involved with clubs than were the large family children. This effect was especially powerful for boys, especially Catholic boys. In comparing Table VIII-8 with Table VIII-7 it can be seen that in general the family size effects were of about the same magnitude and in roughly opposite directions. Thus while the large family children tended to prefer athletic teams, the small family children tended to prefer club memberships instead. The family size effect was particularly marked for the Catholic boys in both cases.

Number of Best Friends and Family Size

There was no family size effect on the next variable examined, that of the number of best friends which the child recorded. In this analysis the same restriction of combining those who had four or more friends into one group was used. Unfortunately a large portion of the children had four or more friends (44 percent of the small family and 56 percent of the large family children) and so the lack of significance found may relate to this collapsing of categories. The means for number of friends (with these collapsed categories) are presented in Table VIII-9.

Table VIII-9

Number of Best Friends by Family Size, Controlled on Sex and Religion

Group	Mean Number of Best Friends Small	Large	(Large-Small)	t-test Significance
Boys	3.03	3.19	.16	N.S.
Catholic Boys	3.20	3.09	-.11	N.S.
Non-Cath. Boys	2.96	3.42	.46	.05
Girls	3.07	3.02	-.04	N.S.
Catholic Girls	2.88	3.05	.17	N.S.
Non-Cath. Girls	3.12	2.96	-.15	N.S.
All Children	3.05	3.10	.05	N.S.

From Table VIII-9 it can be seen that there is no overall family size effect, nor is there a significant effect for boys nor for girls. Among Non-Catholic boys there was a significant family size effect, with the large family Non-Catholic boys tending to have a greater number of best friends.

Number of Best Friends at the Same School by Family Size

The extent to which a child's friendships are concentrated in the school was indicated by the number of his best friends which were attending the same school. Table VIII-10 presents the data on friends in school.

Table VIII-10

Number of Best Friends Attending Same School by Family Size, Controlling on Sex and Religion

Group	Mean Number of Friends at Same School Small	Large	(Large-Small)	t-test Significance
Boys	2.27	2.73	.46	.05
Catholic Boys	2.29	2.81	.52	.10
Non-Cath. Boys	2.26	2.55	.29	N.S.
Girls	2.24	2.60	.36	.05
Catholic Girls	2.44	2.65	.21	N.S.
Non-Cath. Girls	2.19	2.49	.30	N.S.
All Children	2.25	2.66	.40	.001

This Table VIII-10 indicates a powerful family size effect, with the large family children having more of their best friends at school with them. This effect is significant for both boys and for girls but loses significance with the smaller sample sizes of the four religious by sex groups. In all subgroups, the direction of the effect is the same, with larger family children tending to have more of their best friends attending the same school.

Participation in Social Activities and Clubs by Family Size

A set of social activities were examined for family size effect. These included participation in informal neighborhood groups, participation in church, religious and charitable groups and participation in political clubs or organizations. In none of these organizations or social activities was there a significant family size effect. The average child was a member but rarely active in informal neighborhood groups and in church groups while the average child was not a member of political clubs or organizations.

The participation of children in social clubs, fraternities and sororities was also examined. There was no major family size effect. However when the children were subdivided into sex by religious groups, one of the four showed a family size effect significant at the .05 level. For Non-Catholic Girls, there was a tendency for the small family girls to be more active in social clubs and sororities than were the large family girls. This effect was not significant for the total sample, nor for all girls, nor for all boys nor for boys of either religious group.

Hours Spent With the Opposite Sex by Family Size

The last variable examined in terms of social participation was the number of hours spent with the opposite sex. This data is presented in Table VIII-11. There was no significant family size effect for all children, nor when the sexes were examined separately. As can be seen from the table, the effect was in the opposite direction for the two sexes. When the children were further subdivided into the four groups by sex and religious background, two of the groups had significant trends by family size.

Table VIII-11

Hours Spent with the Opposite Sex by Family Size, Controlled on Sex and Religion

Group	Mean Hours with Opposite Sex Small	Large	(Large-Small)	t-test Significance
Boys	8.02	9.45	1.43	N.S.
Catholic Boys	8.18	8.42	0.24	N.S.
Non-Cath. Boys	7.95	12.07	4.12	.05
Girls	11.32	9.97	-1.35	N.S.
Catholic Girls	13.30	9.73	-3.57	.10
Non-Cath. Girls	10.79	10.53	-0.26	N.S.
All Children	9.95	9.72	-0.23	N.S.

Non-Catholic boys from large families spent significantly more time with girls (an average of about four hours more per week) than did Non-Catholic boys from small families. On the other hand there appeared to be some tendency (significant at the .10 level) for Catholic girls from small families to spend more time with boys than did the large family Catholic girls. Since these two trends were in the opposite directions and the other two sex by religious background groups did not have measureable family size effects, it is difficult to make any conclusions about the effect of family size on a child's tendency to spend time with people of the opposite sex.

Summary of Social Participation and Family Size

The initial two models to be tested in the social participation area contrasted two reasonable theories, one predicting greater social participation of the small family children and the other predicting greater social participation of the large family children.

The results indicate that large family children were more involved in athletic teams, but less involved in clubs than small family children. There was no significant family size effect for the number of friends, nor for the participation in informal groups in the neighborhood, in religious or charitable clubs, in political clubs or organizations, and in social clubs. Further there was no overall effect of family size on time spent with people of the opposite sex. There was a significant tendency for more of the best friends from large families to be in school.

While the basic theoretical question of the direction of family size effects on social participation is not resolved by these results, it is possible to further specify the theory. From these results it is possible to see that a large family background leads to a more athletic orientation, especially for boys, while a small family background leads children, again especially boys, toward a preference for formal school clubs and organizations. The factors relating to participation in athletics seem to be quite different, and opposite, from those leading to club participation.

The finding that large family children had a higher proportion of their best friends in school may mean that the small family children were more likely to have best friends from the neighborhood who go to different schools, or from their clubs. Clubs are likely to draw from a wider group than just school while athletic teams are, at this age, almost exclusively school based. Thus there would be a greater tendency for the sports minded large family children to find more of their best friends in school.

F. Educational and Occupational Aspirations by Family Size

On the whole it was expected that the large family child would be less oriented toward college than would be the small family child.

Plans to Go to College and Family Size

The plans the children had about college were examined. For this analysis a dichotomy was used, either the child planned to go on to college directly after college or not. Table VIII-12 presents the data in terms of the percent of children planning to go on to college directly after high school. The test for independent proportions was used for statistical significance testing.

Table VIII-12

Percent of Children Planning to Go To College Directly After High School by Family Size, Controlled on Sex and Religion

Group	Percent Planning on College Immediately			
	Small	Large	(Large-Small)	Significance
Boys	75.0%	60.3%	-14.7%	.05
Catholic Boys	70.6	57.4	-13.2	N.S.
Non-Cath. Boys	77.0	67.4	- 9.4	N.S.
Girls	72.7	67.2	- 5.5	N.S.
Catholic Girls	71.9	71.9	0.0	N.S.
Non-Cath. Girls	73.0	56.6	-16.4	.05
All Children	73.7	64.0	- 9.7	.05

There was, as expected, a significant family size effect on college plans. The small family children were significantly more likely to plan to enter college immediately after high school than were the large family children. When the analysis was specified by sex, the family size effect was significant and relatively large for boys but was small and non-significant for the girls taken as a whole. However one of the female religious groups, Non-Catholic Girls had a significant family size effect.

The magnitude of the effect indicated that about ten percent fewer of the large family children planned to start college right after high school than did the small family children.

Level of Occupational Aspiration and Family Size

Each child was given a long list of occupations in alphabetical order and asked to choose the one they would most like to make their career. The child was allowed to write in any career which was not on the list. These occupations were assigned a status rank using the Inkeles & Smith (1974) system with occupations coded (1) being the highest and those coded (7) being the lowest. The results are presented in Table VIII-13.

From this table there is an indication (significant at less than .10) that small family children do indeed tend to aim for higher occupations. The effect is clearly significant for boys and especially for the Non-Catholic boys. These results did not take into account the socio-economic status of the family. Since the large families, and especially the Non-Catholic large families had higher socio-economic status, these results are especially striking.

Table VIII-13

Level of Occupational Aspiration by Family Size, Controlled on Sex and Religion

Group	Mean Occupational Aspiration			t-test
	Small	Large	(Large-Small)	Significance
Boys	5.30	4.98	-.32	.05
Catholic Boys	5.24	5.12	-.12	N.S.
Non-Cath. Boys	5.33	4.66	-.68	.05
Girls	4.77	4.69	-.10	N.S.
Catholic Girls	4.81	4.72	-.08	N.S.
Non-Cath. Girls	4.76	4.55	-.21	N.S.
All Children	5.00	4.82	-.18	.10

What this table implies, taken together with the earlier results on the socio-economic status of the fathers is that while large family Non-Catholic fathers tended to have attained occupations of higher status relative to small family Non-Catholic fathers, their sons were actually less ambitious than were the sons raised in small families.

In summary, the data presented in this section has indicated that there are family size effects both on college and occupational aspirations. These effects were especially strong for boys. The small family children were more likely to plan to go to college immediately after high school and were aiming for jobs and careers of higher occupational prestige than were the large family children.

G Self-Concept and Attitude Toward School by Family Size

On the whole it was predicted that the small family child would have a more positive self-image and would have a more positive attitude toward school. He would not want to stop going to school and would not look forward to going to work if he had to drop out of school. On the other hand it was predicted that the large family child would be more likely to feel that working would be better than staying in school.

Self-Perceived Intelligence and Family Size

The children were asked "How bright or intelligent do you think you are in comparison with the other students in your grade?". The response categories were: (1) Among the lowest, (2) Below Average, (3) Average, (4) Above average, and (5) Among the brightest. The data are presented in Table VIII-14.

Table VIII-14

Self-Perceived Intelligence by Family Size,

Controlled on Sex and Religion

Group	Mean Self-Perceived Intelligence			t-test
	Small	Large	(Large-Small)	Significance
Boys	4.07	3.64	-.43	.001
Catholic Boys	3.91	3.57	-.45	.001
Non-Cath. Boys	4.19	3.81	-.34	.05
Girls	3.87	3.69	-.18	.05
Catholic Girls	3.78	3.65	-.13	N.S.
Non-Cath. Girls	3.89	3.79	-.10	N.S.
All Children	3.95	3.67	-.28	.001

These data present a striking and powerful family size effect. Children from small families were far more likely to feel that they were above average or among the brightest in their grade than were children from large families. This effect, while significant for girls, was almost twice as powerful among boys.

Small family children felt that they were more intelligent than did large family children. As will be reported later, small family children had measured intelligences which were also higher than large family children.

Importance of Getting a Job by Family Size

The children were asked the following question to indicate their relative preference for school versus dropping out of school and going to work. "How important to you is getting a job and starting to earn a living as soon as possible?". The response categories ranged from (1) Extremely important to (5) Unimportant, so that a high score indicates a pro-school attitude. The data are presented in Table VIII-15.

There was a significant family size effect in the direction predicted. Children from small families were less interested in quitting school and going out to work than were the large family children. This effect, when specified by sex, was significant and quite powerful for the boys, but was not significant for the girls. When religious background was further specified, it was found that the effect was very powerful for the Non-Catholic boys and not significant for the other three religious by sex groups.

Table VIII-15

Importance of Getting a Job Immediately by Family Size, Controlled on Sex and Religion

Group	Mean Ratings of Importance of Getting a Job (High means Unimportant)			t-test Significance
	Small	Large	(Large-Small)	
Boys	3.66	3.09	-.57	.01
Catholic Boys	3.09	3.02	-.07	N.S.
Non-Cath. Boys	3.93	3.29	-.64	.05
Girls	3.35	3.24	-.10	N.S.
Catholic Girls	2.97	2.98	.01	N.S.
Non-Cath. Girls	3.45	3.85	.40	.10
All Children	3.48	3.17	-.30	.01

Feelings About Stopping Going to School by Family Size

The children were asked "If something happened and you had to stop school now, how would you feel?". The response categories were: (1) Very happy -- I'd like to quit, (2) I wouldn't care one way or the other, (3) I would be disappointed, (4) I'd try hard to continue, and (5) I would do almost anything to stay in school.

This question was meant to measure the commitment the child had toward school and how much he or she really wanted to continue in school. The data are presented in Table VIII-16.

Table VIII-16

Feelings About Stopping School by Family Size,

Controlled on Sex and Religion

Group	Mean Disappointment at Stopping School			t-test
	Small	Large	(Large-Small)	Significance
Boys	4.04	3.63	-.41	.001
Catholic Boys	3.94	3.56	-.38	.10
Non-Cath. Boys	4.08	3.79	-.30	N.S.
Girls	3.99	3.95	-.04	N.S.
Catholic Girls	3.81	3.98	.16	N.S.
Non-Cath. Girls	4.04	3.88	-.16	N.S.
All Children	4.01	3.80	-.21	.01

As expected, the small family children would be more disappointed if they had to stop going to school than would be the large family children. Again, the effect was significant for the boys but not for the girls.

Summary of Self-Concept and Attitude Toward School

This section has reported on three variables related to self-concept and attitude toward school. The results have been the same for all three variables. Small family children had higher self-concepts and liked school more and would have been more disappointed if they had to stop going to school than large family children. In all three cases the family size effect was significant for all children taken together but when further specification was made by sex of child, the effect was not significant for the girls and was quite powerful and significant for the boys.

From this it is possible to conclude that coming from a small family rather than from a large family has powerful effects on the self-concept and liking for school of boys. The small family boy thinks he is intelligent and likes school considerably more than does the large family boy.

H. Study Hours and Home Chores by Family Size

It was predicted that the small family child would spend more hours per week studying and more hours per week on chores around the home than would the large family child. This was not found to be the case.

With respect to hours spent studying per week, there were no differences in the mean number of hours per week by family size. The average child reported spending around nine hours per week studying and there was no family size effect for the entire group of children, nor for either sex considered separately, nor for the sex by religious background groups.

On the other hand there was a family size effect on hours spent doing chores. However the effect was in the opposite direction from that predicted, with the large family girls especially spending more time working around the house than the small family girls. Table VIII-17 presents the data.

Table VIII-17

Mean Hours Per Week Doing Home Chores by Family Size, Controlled on Sex and Religion

Group	Mean Hours Per Week on Home Chores			t-test
	Small	Large	(Large-Small)	Significance
Boys	3.11	3.20	.10	N.S.
Catholic Boys	3.14	3.14	.00	N.S.
Non-Cath. Boys	2.99	3.35	.36	N.S.
Girls	3.21	4.26	1.05	.001
Catholic Girls	3.56	4.44	.88	N.S.
Non-Cath. Girls	2.99	3.95	.96	.05
All Children	3.18	3.77	.59	.01

From Table VIII-17 it can be seen that girls spend on the average about an hour more per week on home chores when they come from a large family than when they come from a small family. For boys the effect is very small and non-significant, but the effect for girls is so strong that it makes the effect for all children significant.

G. Summary of Family Size Effects on Children in Boston Suburban Sample

This chapter has found several effects of family size on children. Small family children tended to get better grades, with almost twice as many small family children in the very highest grade point average levels as compared to the large family children. Similarly small family children were much more committed to school and would have felt worse than the large family children if they had to stop going to school. Small family children felt themselves to be brighter than average in much higher proportion than did large family children. Most of these achievement and attitude toward school effects were considerably stronger for the boys than for the girls.

Boys from small families were aiming at higher occupations, on the average, than were boys from large families. There was little family size effect on occupational aspirations of the girls. This result is even more striking when it is remembered that the fathers of large families, especially among the Non-Catholics, tended to have higher occupational status than did the fathers of small families in this sample.

There was little influence of family size on the age at which a child expected to marry but there was, as predicted, a strong association between family size and the number of children anticipated in the family of procreation. On the whole, the large family children expected to have about half a child more than did the small family children. The ideal family size for small family children averaged about two and a half children while the average large family child expected to have about three children. Furthermore about twice as many (9.6 percent to 5.8 percent) of the large family children expected to have as many children as God might send than did the small family children.

Children from small families generally expected to space their own children out somewhat more than did the children from large families. This difference in desired spacing from marriage to first birth, while significant, was less than two months for children from the large and small families. Small family children expected to have their first baby about 20 months after marriage while the large family children were looking for their first baby some 18 months after marriage.

The differences were more significant and larger when the spacings between the first and second child were examined. The small family children, on the average were expecting their second baby some 25 months after the birth of the first, while large family children expected that the second baby would come along only 20 months after the first. These differences were very greatly due to the girls, where the family size effect was some seven months difference while for the boys it was only two months.

When the composition of the desired families was examined it was found that most children of both sexes preferred to have families with an equal number of children of both sexes. However, when a preponderance of one sex was desired, boys were preferred to girls for children of both sexes. There was a family size effect in that boys from large families tended to prefer a preponderance of boys in their own families of procreation while girls from large families tended to prefer a preponderance of girls in their prospective families. In general, girls were about five times as likely as boys to prefer families with a preponderance of girls.

In terms of social participation, large family children, especially boys, were more involved with athletic teams and less involved with clubs than were small family children. For many particular types of formal and informal associations there was no significant family size effect. There was a significant tendency for large family children to find a greater proportion of their best friends in the same school as contrasted to the small family children.

The small family children were more definite in their plans for college and about ten percent more of the small family than the large family children expected to go to college immediately after high school. This finding is in keeping with the higher occupational aspirations and the higher self-concept and greater orientation toward school of the small family children. These effects were stronger for boys than for girls.

Finally, for girls anyway, the large family children were spending more time working on home chores (about an hour more per week) than were the small family girls.

IX FAMILY SIZE EFFECTS ON CHILDREN

(Puerto Rican Sample)

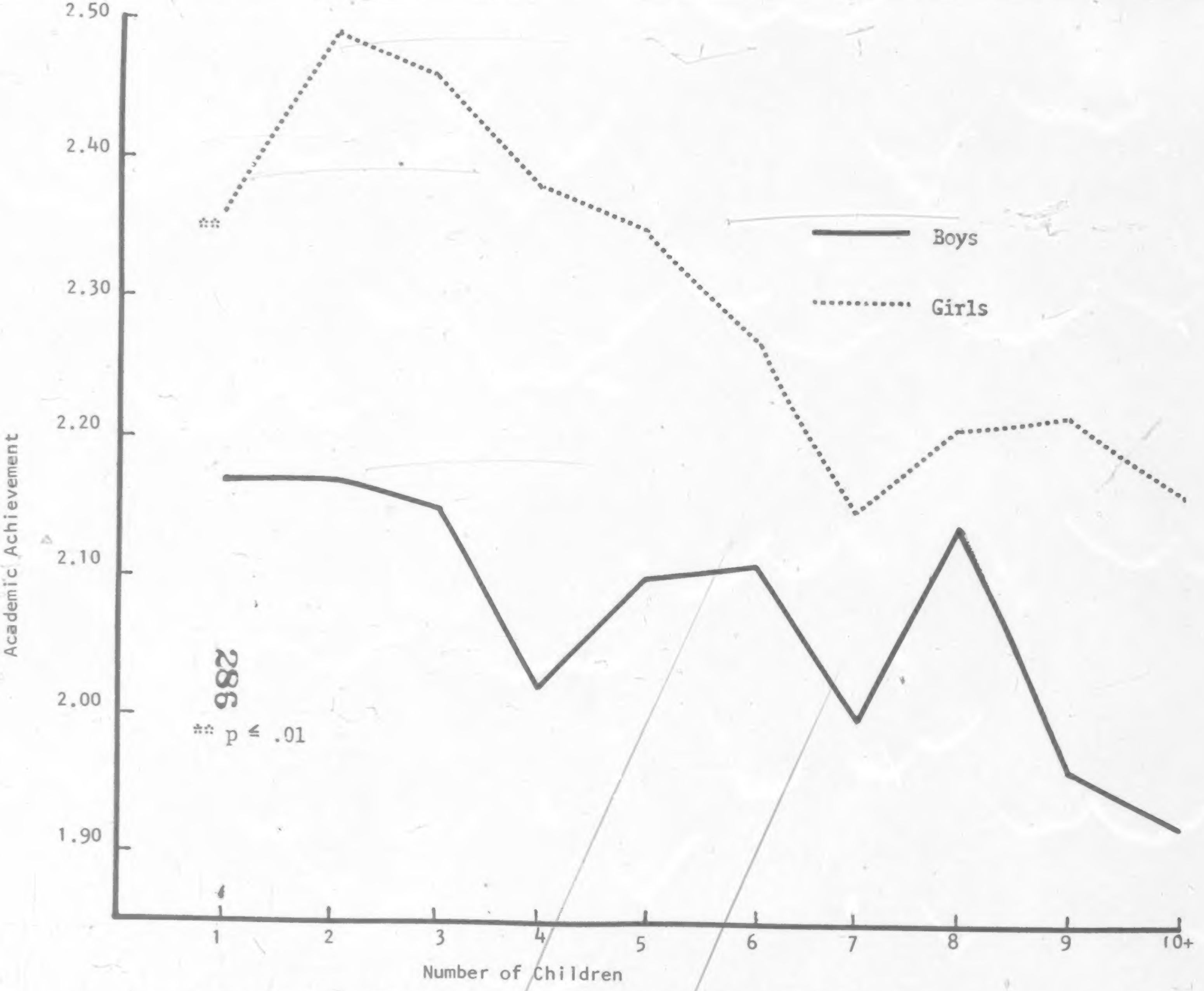
This chapter covers many of the same issues as the last chapter, but with the data from Bayamon, Puerto Rico rather than with the data from the Boston suburbs.

A. Academic Achievement and Family Size

The relationship of quality of academic work as reflected in grade point average and size of family was examined in the Puerto Rican sample. It was predicted that children from small families would perform at higher levels academically than would children from large families.

Since the sample was considerably larger in Puerto Rico, it was possible to examine academic achievement across each of the family sizes from size one to more than ten. Separate analyses of variances for boys and for girls were conducted where the independent variable was the family size and the dependent variable was the academic achievement. As expected, the small family girls' academic achievement as measured by the grade point average was higher than that of the large family girls ($P = .01$, $F = 6.93$ with 9 and 2292 df). However there was no significant over-all effect of family size on grade point averages. The mean academic achievement for boys was lower than that of the girls and did not differ by family size. These data are presented in Figure 9 .

As this figure makes apparent, girls from smaller family sizes, down to family size two, made better grades. There was a fairly



** p ≤ .01

Figure IX-1 Relationship Between Academic Achievement and Family Size

regular progression of declining grade point averages from two children families until seven child families. For families with more than seven children there seemed to be no relationship between number of children and the grades.

From these analyses it can be concluded that, in Bayamon, girls made better grades than did boys. Girls from two-child families tended to make the best grades. As the number of siblings a girl had increased she did progressively worse in school until there were as many as seven children in the family. At that point, additional children made no difference to a girl's academic achievement.

For the boys, the effect of family size on grades was variable and not significant.

B. Occupational Status Aspirations and Family Size

There was an effect of family size on occupational aspirations. Table IX-1 presents this data. In this table the highest occupations were coded (7) and the lowest were coded (1). The analysis of variance gave a significant level of .005 (F = 6.06, with 9 and 3590 df).

Table IX-1

Occupational Level Wanted by Family Size, Bayamon Puerto Rico Sample

	Number of Children in Family									
	1	2	3	4	5	6	7	8	9	10+
Mean	4.63	4.89	4.78	4.74	4.76	4.60	4.45	4.54	4.39	4.40
S.D.	1.29	1.33	1.33	1.32	1.35	1.38	1.29	1.29	1.33	1.34
N	131	492	638	552	456	353	259	189	154	371

The results presented in Table IX-1 follow the general pattern of the Puerto Rican results, the children with the highest aspirations coming from two-child families, with aspiration levels dropping fairly smoothly with additional children until they reached the seven child family beyond which there was not much further influence of family size on aspirations. The one-child family was anomalous in that children from these very small families had occupational aspirations at about the same level as six-child family children.

When the analysis of variance was rerun, covarying out the socio-economic status of the family, however, the effect of family size on occupational aspirations was no longer significant. There was a very high relationship between the occupational aspiration of the child and that of the parents. After controlling for father's occupational status there was no significant difference in the occupational aspirations of children from various family sizes.

C. Marriage Plans, Social Participation and Family Size

There were several variables which had been expected to vary by family size, but whose analyses were found to be insignificant. These variables which were found not to vary by family size were: (1) number of children planned, (2) number of children planned, covarying socio-economic status, (3) planned age at marriage, (4) planned age at marriage, covarying socio-economic status, (5) plans for further education after high school, (6) plans for further education, covarying socio-economic status, (7) hours spent per week studying, (8) hours per week spent in doing chores around the home, (9) desire to stay in school, (10) number of best friends in school, (11) number of best friends in school, covarying socio-economic status, (12) intensity of the child's involvement in formal organizations, and (13) intensity of involvement in organizations, covarying socio-economic status.

D. Participation in Organizations and Family Size

A one-way analysis of variance was conducted with the dependent variable being the number of organizations a child was a member of and with the size of the family as the independent variable. There was a significant family size effect at the .05 level (F = 2.32 with 9 and 4,239 degrees of freedom). Table IX-2 presents the mean number of organizations the children were participating in by family size.

Table IX-2

Mean Number of Organizations Participated in by Family Size

	Number of Children in the Family									
	1	2	3	4	5	6	7	8	9	10+
Mean	1.78	2.19	2.08	2.09	2.00	2.03	1.95	2.03	1.85	1.91
S.D.	1.13	1.57	1.44	1.48	1.41	1.41	1.29	1.52	1.30	1.33

The general pattern was for the children from two-child families to tend to belong to more organizations than children from any other size family. Children from three-child, four-child, five-child and six-child families were very similar in their organizational participation. Interestingly, the children from one-child families were less active than children from any other size family.

E. Summary of Family Size Effects on Children in Bayamon, Puerto Rico Sample

In the Puerto Rican sample it was possible to examine each family size separately from the one-child family to families with ten or more children. A general pattern emerged, where there were significant family size effects. This pattern was that the two-child families produced children who did better in terms of academic achievement, occupational aspirations, and belonged to more clubs and organizations than children from other sizes of families. Generally there was a falling off from the high standards set by the two-child family children for children from families with three, four, and five children. Usually this decline continued until the seven child family was reached. After the seventh child, the family size did not seem to affect the dependent variable any further.

In all of these analyses, the one-child family children were comparable to children from families with six or more children. In fact for the dependent variable of number of organizational memberships, the one-child family children belonged to fewer organizations, on the average, than children from any other sized family.

In this Puerto Rican data, there were a great many variables for which there were no significant family size effects. These include age at marriage, number of children desired, plans for post-high school education, hours spent studying and doing home chores, desire to stay in school, and the number of best friends in school.

X FAMILY SIZE EFFECTS ON PERSONALITY

Very few studies have been done trying to investigate the relationship between personality of children and the number of siblings they were raised with. Eysenk and Cookson (1970), using a sample of 4,000 eleven year olds, found that smaller families were associated with brighter, more extroverted, and less neurotic children. They also found that early born children did not differ in personality from later born children.

It was predicted that the small family children, in contrast to children coming from big families, would tend to have the following traits. They should be more reserved, more intelligent, emotionally stable, phlegmatic, obedient, sober, conscientious, shy, tender-minded, doubting, apprehensive, self-sufficient, controlled, tense, less authoritarian, less dogmatic, more test anxious, less eager to do what is deemed socially desirable, and more internally controlled than the big family children. Children from large families were expected to exhibit the following set of characteristics: outgoing, less intelligent, more affected by feelings, excitable, assertive, happy-go-lucky, expedient, venturesome, tough-minded, vigorous, placid, group-dependent, undisciplined self-conflict, relaxed, more authoritarian, more dogmatic, less test anxious, more eager to do what is socially desirable and more externally controlled than small family children.

This chapter examines the extent to which these expectations were found to be supported in the Boston Suburban sample and in the Puerto Rican sample. As a prelude, it is sufficient to say that most of these expectations were not found to be statistically significant.

A. High School Personality Questionnaire (HSPQ) and Family Size

One of the major instruments used to measure personality in this study was the High School Personality Questionnaire (HSPQ) developed by Cattell and Cattell (1968). This instrument consists of fourteen scales, each ten items long, with two unscored check items for a total of 142 items. Thirteen of the scales are measures of personality and one (Factor B) is a ten item vocabulary test to measure intelligence.

Suburban Boston Sample Data on HSPQ and Family Size

To control for the sex of the child and family religion, four multivariate analyses of variance were conducted, for Catholic boys, Catholic girls, Non-Catholic boys, and for Non-Catholic girls.

The effect of family size on HSPQ personality measures was significant only for the Non-Catholic girls. In this group, the effect of family size was significant at the .03 level. Only one personality trait was significant in the univariate analyses, that of Enthusiasm (Factor F).

Large family girls were found to be more likely to be "sober and serious" among the Non-Catholic group.

Puerto Rican Sample Data on HSPQ and Family Size

The effects of family size on the personality of the children as measured by the HSPQ were examined by using a multivariate analysis of covariance procedure. The effect of socio-economic status was removed by covarying it out. Three multivariate analyses of covariance were run, one for the total sample, one for boys only, and a third for girls only. In these analyses the dependent variables were the HSPQ personality traits while the independent variable was family size (ten levels) and socio-economic status was the covariate.

The results indicated relatively little effect of family size on the personality of children after socio-economic status had been removed.

For the total sample, only one root of the multivariate analysis of covariance approached significance (p = .056). For the analysis of the girls, the most significant root was at about the same level of near significance (p = .071) while for the boys the overall analysis did not have a root even approaching significance (p = .278)

When the individual factors were examined in a univariate fashion, there were two personality traits which exhibited a family size effect for the boys and six for the girls. The data are presented in Table X-1.

Table X-1

Significant Univariate HSPQ Family Size Effects

HSPQ Factor	Name	Direction	Significance
	Boys		
Q2	Self-Sufficiency	Large Family	.04
Q4	Tension	Large Family	.05
	Girls		
I-E	Introversion-Extroversion Factor	Small Family	.01
B	Intelligence	Small Family	.01
F	Enthusiasm	Small Family	.05
J	Individualism	Large Family	.05
Q2	Self-Sufficiency	Large Family	.01
Q4	Tension	Small Family	.01

These findings mean that, with socio-economic status covaryied out, there was a tendency for the smaller family children to be more group dependent (HSPQ-Factor Q2) while there was a tendency for the large family children of both sexes to be more self-sufficient.

For both sexes the large family children tended to be more relaxed, while the small family children tended to be more tense (HSPQ-Factor Q4).

Girls from small families, even after covarying out socio-economic status, tended to be more intelligent, enthusiastic, and liking of group action. The large family girls tended to be less intelligent, more sober and serious, and more reflective and internally constrained (individualistic). The small family girls tended to be more extroverted while the large family girls tended to be more introverted.

These relationships were actually somewhat more complicated than merely contrasting large family children with small family children. For example, HSPQ Factor J (Individualism) was lowest for the girls from families with three to seven children, and higher for one- and two- child families as well as for families larger than seven children. Hence the medium size family girls (from three to seven-child families) were characterized as given to action, whereas girls of both smaller and larger families tended to be obstructive.

B. Other Personality Measures and Family Size

Other measures of personality used were the Dogmatism scale (D), as modified by Kerlinger and Rokeach (1966), the Children's Social Desirability Questionnaire (CSD) of Crandall, Crandall, and Katkovsky (1965), Sarason's Test Anxiety Scale for Children and the Intellectual Achievement Responsibility Questionnaire (IAR) of Crandall, Katkovsky, and Crandall (1965). The Adorno *et al.* Authoritarianism (F) scale as modified by Kerlinger and Rokeach (1966) was also used.

Suburban Boston Sample Data on Other Personality Scales

For each of these scales a multivariate analysis of variance was carried out in the suburban Boston data for the four sex by religion groups. It was found that family size did not have a significant effect in any of the four groups. In terms of univariate findings, one scale, the Children's Social Desirability Scale was significant for the Catholic girls. In this group, small family girls tended to score higher than did large family girls. This means that small family Catholic girls tended to be more concerned about what others would think of them than were large family Catholic girls. This effect was significant at the .02 level.

Family size did not have a significant effect on the Intellectual Achievement Responsibility, on Authoritarianism, nor on Dogmatism for any of the four sex by religious background groups.

Puerto Rican Sample Data on Other Personality Scales

In Puerto Rico, the Authoritarianism scale (F-scale) was significantly affected by family sizes for both boys ($p = .05$) and for girls ($p = .01$). In general, the girls were more authoritarian the larger the family size whereas the boys showed a somewhat erratic pattern. Of particular interest was the finding that generally boys from larger families were considerably less authoritarian than were girls of the same size family. Except for the one-child families (which tended to be very authoritarian), boys as well as girls tended to increase in their authoritarianism as family size increased.

F-scale authoritarianism was highly related to socio-economic status, and when SES was covaryied out the family size effect for authoritarianism was no longer significant for either sex.

Sarason's Test Anxiety for high school students was significantly related to family size for both sexes. Boys who were only children were considerably more test anxious than were children of any other size family. But from family sizes of two and above, test anxiety generally increased with family size. This was true for both sexes and for both the level of significance was .05. When socio-economic status was partialled out, the test anxiety family size effect was no longer significant for either sex.

Social desirability scores were significantly different by family size for girls. In general, the girls from the larger families tended to answer in a more socially desirable way than did those from small families. These results were in the opposite direction from those for the Boston sample.

When socio-economic status was removed from social desirability scores, there was no family size effect which was significant for boys but the effect remained for girls. Even with SES covaried out, large family girls tended to answer in a more socially desirable way than did small family girls. This means that these large family girls were more concerned with what other people thought about them and were less self-confident about their social acceptability than were the small family girls. Girls as a group, were more concerned with social desirability than were boys at all family sizes.

C. Achievement Related Attitudes and Family Size

Gene M. Smith of Harvard has developed an instrument called the Test of Effective Academic Motivation or TEAM. This instrument consists of some 300 personality and attitudinal items which are scored into 38 scales. The scales have been factor analyzed by Smith and reduced to eight dimensions or factors which have been found to be related to academic achievement. These eight factors are oblique, that is intercorrelated among themselves. These factors were:

1) Feels Valued and Accepted,
2) Obedient and Law-Abiding,
3) Works Hard and Effectively,
4) Feels Capable,
5) Confident Academically,
6) Self-Sufficient,
7) Likes School and Intellectual Activities, and
8) Ambitious

The TEAM was given to the teenage children in the Boston Suburban sample. The correlations of each of the TEAM factors with a measure of academic achievement, the grade point average, are presented in Table X-2. Also presented in this table are the intercorrelations among the eight TEAM factors.

Table X-2

Intercorrelations among TEAM factors and with Grades

	Grades	Valued	Obed.	Works	Capable	Conf.	Self Suf	Lk-Schl	Ambit.
Grade Pt. Ave.	1.00	.26	.25	.33	.31	.38	.09	.22	.35
Feels Valued	.26	1.00	.36	.59	.50	.29	.15	.41	.57
Obedient	.25	.36	1.00	.64	.35	.07	.17	.39	.48
Works Hard	.33	.59	.64	1.00	.57	.34	.32	.56	.68
Feels Capable	.31	.50	.35	.57	1.00	.42	.36	.54	.46
Confident Academ.	.38	.29	.07	.34	.42	1.00	.18	.42	.38
Self-Sufficient	.09	.15	.17	.32	.36	.18	1.00	.31	.09
Likes School	.22	.41	.39	.56	.54	.42	.31	1.00	.47
Ambitious	.35	.57	.48	.68	.46	.38	.09	.47	1.00

In this data all eight of the TEAM factors with the exception of Self-Sufficient were moderately highly related to academic achievement as measured by grade point average. These factors were also moderately highly intercorrelated among themselves.

To analyze the effects which family size might have on these attitudes, a three way multivariate analysis of variance was conducted with the eight TEAM factors as dependent variables and with the factors of family size, sex, and religious background (whether the mother was Catholic or Non-Catholic) as independent variables.

The main effect for family size was significant, indicating that children from different sized families did indeed have different levels of these TEAM factors. This main effect of family size was complicated by the simultaneous finding of two types of interaction effects, a family size by sex effect ($p = .01$) and a family size by religion effect ($p = .07$). Because of the presence of these interactions, it was decided to do separate analyses within the four sex by religion groups. Thus four additional multivariate analyses were conducted, one for Catholic Boys, one for Catholic Girls, one for Non-Catholic Boys, and finally one for Non-Catholic Girls. In each of these analyses there was one independent variable, family size, and the eight TEAM factors were the dependent variables.

Separating the analysis into these four analyses allows a better understanding of the effects of family size within each group. However the smaller sample size within each of these analyses forces some effects which would have been significant in the larger analysis to fail to reach significance.

The data for the effects of family size on the TEAM factors are presented in Table X-3 for all children and for the two sexes separately. In Table X-4 the family size effects are presented for the four sex by religious background groups.

All of the TEAM factors have been constructed in such a way that the high score on the factor is a positive indication of academic achievement. This is indicated by the fact that all the correlations in the first row and column of Table X-2 are positive. The effects presented in Tables X-3 and X-4 are formed by subtracting the mean score for the large family children from the mean score for the small family children and then dividing by a pooled estimate of the standard deviation of these scores. Thus these effects are in terms of the standard deviations of the measures.

Table X-3

Family Size Effects on TEAM Factors in Standard Deviation Units

TEAM Factor	All Children	Boys	Girls
Feels Valued	.22**	.18	.25*
Obedient	.24**	.08	.40**
Works Hard	.26**	.31**	.21*
Feels Capable	.32**	.42**	.23*
Confident Academically	.32**	.46**	.18
Self-Sufficient	.04	-.10	.16
Likes School	.03	.27**	-.09
Ambitious	.28**	.24*	.31**

* Significant at the .05 level or beyond.

** Significant at the .01 level or beyond.

This table indicates that for six of the TEAM factors there was a significant family size effect and in every case the small family children had higher scores. We can thus say that the small family children tended to feel more valued and accepted, were more obedient and law-abiding, tended to work harder and more effectively, felt more capable, were more confident academically, and were more ambitious than were the large family children.

These findings with the TEAM reflect the observed higher grades and higher occupational aspirations of the small family children found earlier.

When the TEAM factors were examined for family size effects separately by the sex of the child, there were significant family size effects for five of the eight factors for the boys and for five factors for the girls.

For the boys the factors of working hard, feeling capable, being confident academically, liking school, and being ambitious were significant. Again the small family boys were higher on these factors than were the large family boys. For the girls, the small family girls tended to feel more valued, be more obedient, work harder, feel more capable, and be more ambitious than did the large family girls. Liking school actually had a negative (but non-significant) effect among the girls.

Table X-4

Family Size Effects on TEAM Factors in Standard Deviation Units for Four Religious Background by Sex Groups

TEAM Factor	Boys		Girls	
	Catholic	Non-Cath.	Catholic	Non-Cath.
Feels Valued	.20	.16	.49	-.00
Obedient	-.02	.18	.40	.40*
Works Hard	.29	.33	.31	.11
Feels Capable	.58**	.25	.46*	-.00
Confident Academically	.45*	.48*	.25	.12
Self-Sufficient	-.05	-.14	.34	-.03
Likes School	.08	.46*	-.12	-.06
Ambitious	.25	.22	.24	.38*

* Significant at the .05 level or beyond.

** Significant at the .01 level or beyond.

Because of the smaller number of cases in each group in Table X-4, a family size effect has to be of considerably larger magnitude to achieve significance. For example, for Ambitious the family size effect ranges from .22 to .38 but only the .38 effect is significant while in Table X-3 a .24 effect for boys was significant.

Obvious in this table are the several interactions which were found to be significant in the three-way multivariate analysis of variance. For example there was a family size effect for both groups of Girls for the factor of Obedient, but the effect was not significant and was much smaller in magnitude for boys. On the other hand the family size effect for Confident Academically was strong for boys but not for girls. Hence there was a sex by family size interaction.

Catholics of both sexes, who come from small families tended to feel more capable, but this family size effect was very small for the Non-Catholics. Hence there was a religion by family size interaction.

In some cases there was only one of the four groups which had a major family size effect. For example the small family boys from Non-Catholic homes liked school much more than did the large family boys from this group, but the effect of family size in the other three groups was negligible on liking school. On the other hand, for some factors three of the groups had good sized family size effects while the fourth did not. An example is Feels Capable, where the effect was quite strong for both Catholic groups, and of some size for Non-Catholic boys but did not exist at all for the Non-Catholic girls.

D. Summary of Personality and Family Size Results

In the Suburban Boston data only one HSPQ factor, Enthusiasm (Factor F) was found to be related to family size and this was significant only among Non-Catholic girls. In this group the large family girls tended to be more sober and serious while the small family girls tended to be more enthusiastic.

With the much larger sample, there were more significant results with the Puerto Rican data. There it was found that the small family children tended to be more group dependent while the large family children tended to be more self-sufficient. The small family children of both sexes tended to be more tense while the large family children tended to be more relaxed. These two factors (HSPQ-Q2, Self-Sufficiency and HSPQ-Q4, Tension) were the only two significant family size effects for both sexes. However several other personality traits had a significant family size effect among the girls.

In general, the girls from the small families tended to be more extroverted, more intelligent, more happy-go-lucky, more vigorous, and more dependent than were girls from the larger families. These findings, except for intelligence, were actually in the direction opposite to those originally postulated.

Girls from larger families in Puerto Rico tended to present themselves in a more socially desirable way than did the girls from smaller families. However in the Boston sample, the opposite effect was significant among the Catholic girls. In that group, it was the small family girls who were more concerned with their social acceptability than were the large family girls. One interpretation of these opposite effects is that in general the higher socio-economic status norms in Puerto Rico are to have few children and so a girl from a large family is likely to feel that she is at a social disadvantage. However, in suburban Boston towns, most of the Catholic families had more than two children. Hence a Catholic girl from such a small family would be more likely to see herself as socially questioned. than would be a Catholic girl from a large family.

There were no significant family size effects on the other personality measures in the Boston data, but in Puerto Rico it was found that the larger the family the more authoritarian were the children. This relationship held for both sexes but was stronger for girls.

In Puerto Rico, the large family children tended to be more test anxious than were children from small families. However, among high school students, the only child boys were considerably more test anxious than were boys from any other size family.

Summary of TEAM Factors and Family Size

The Test of Effective Academic Motivation (TEAM) was developed by Gene M. Smith of Harvard. This instrument produces eight factors which are related to academic achievement. This instrument was given to the teenagers in the Boston Suburban sample. The eight factors were: 1) Feels Valued and Accepted, 2) Obedient and Law-Abiding, 3) Works Hard and Effectively, 4) Feels Capable, 5) Confident Academically, 6) Self-Sufficient, 7) Likes School and Intellectual Activities, and 8) Ambitious.

All eight of these TEAM factors were positively correlated with grade point average in this Suburban Boston sample. These correlations ranged from .09 to .35 and all were significant. These eight factors also exhibited considerable intercorrelation among themselves, all positive, and ranging from .07 to .64.

There were family size effects which were significant for the entire sample for six of the eight factors. In all cases, the small family children had attitudes and motivations which were more in the direction of higher academic achievement than were the large family children.

It was found that small family children tended to feel more valued and accepted, were more obedient and law-abiding, tended to work harder and more effectively, felt more capable, were more confident academically, and were more ambitious than were the large family children. In addition, for boys but not for girls, the small family boys tended to like school more than did the large family boys.

There were found to be several differences in the family size effect depending on the sex or religious background of the child. For example Catholic children of either sex from small families tended to feel more capable than did Catholic children from large families. There was little family size effect on Feels Capable for Non-Catholic children. Similarly, girls from small families were considerably more obedient than were girls from large families, but there was little family size effect on Obedient for boys. On the other hand boys, but not so much girls, from small families were considerably more likely to feel confident academically than were large family boys.

On the whole, the most powerful family size effects were for Feels Capable, Confident Academically, and Ambitious. These three traits were much more likely to characterize the small family child than the large family child.

XI EFFECTS OF CHILD SPACING ON CHILDREN

The way a mother spaces her children affects the children's physical and socio-emotional development. Infants born to mothers who had experienced a large number of closely spaced pregnancies were found to be more lethargic than were those infants born to mothers who had experienced fewer and more widely spaced pregnancies (Waldrop and Bell, 1966). When these highly lethargic infants were followed up two and a half years later, they exhibited greater dependency behavior and less ability to defend themselves against peers than did children who, as infants, were not lethargic.

Hypotheses - Children from large, closely spaced families were predicted to be more conforming and more psychologically insecure, especially in situations where they had to function as independent people than would be children from more distantly spaced families.

However, where the predominant mode of interaction consisted of team work, closely spaced children were predicted to participate more and to adapt better.

Among small family children, it was expected that the closely spaced children would tend to be more accepted socially and to be more competent in social endeavors than would be children from more distantly spaced families.

A. Social Participation and Child-Spacing

Social participation was measured in the Suburban Boston sample by examining the number of clubs and organizations a child belonged to and his or her extent of participation in them. Spacing was measured in two ways. One way was Spacing to Next Oldest (Space-Old) and the other way was examining the Spacing to Next Youngest (Space-Young). These two spacing measures were somewhat different in that for a middle child they focus on his spacing to the next oldest sibling (for Space-Old) and on the spacing to the next youngest sibling (for Space-Young). For the Space-Old measure, first-born children were omitted from the analysis. For the Space-Young measure, the youngest child was omitted from the analysis. Thus in a two child family, the oldest would be involved in the Space-Young analyses while the youngest child would only be involved in the Space-Old analyses.

Athletic Memberships and Child Spacing

The children were asked the number of teams and athletic clubs they belonged to in the previous three years. There was a relationship between the Space-Old measure and these athletic memberships. For these analyses the index of spacing to the next oldest sibling was trichotomized into the categories of: Less than 18 months, 18 to 30 months, and Greater than 30 months. A Chi-Square analysis of the total sample (of those for whom the Space-Old measure was defined) was conducted between the three categories of Space-Old and the number of teams and athletic memberships in the past three years. This relationship was significant ($p = .03$) indicating that the closer the spacing to the next oldest sibling, the more teams and athletic clubs the child participated in. These data are given in Table XI-1.

The analysis of the relationship of Space-Old to Athletic Teams was repeated for the small family children and for the large family children separately. The relationship was significant ($p = .01$) for the small family children but was not for the large family children. The data for the small family children are presented in Table XI-2. For these small family children, the closer the spacing to the next oldest sibling, the more team memberships.

Table XI-1

Number of Athletic Memberships by Spacing to Next Oldest Sibling

Total Sample

Number of Teams in Last 3 Years	Spacing to Next Oldest Sibling		
	18 Months or Less	19 to 30 Months	More than 30 Months
0	17%	20%	22%
1	12%	16%	16%
2	19%	19%	11%
3	13%	7%	22%
4 or More	40%	38%	30%
	101%	100%	101%

Chi-Square (8df) = 17.45

Probability less than .03

As can be seen in Table XI-1, while only some 30 percent of the children with spacing to the next oldest of more than 30 months had participated in as many as four athletic teams, some 40 percent of the most closely spaced children had. The mean number of teams played on by the children within 18 months of their next oldest sibling was 2.5. For the 19 to 30 month children the mean was 2.3 memberships while for the more distantly spaced children the mean was 2.2 memberships.

Table XI-2

Number of Athletic Memberships by Spacing to Next Oldest Sibling

Small Family Children

Number of Teams in Last Three Years	Spacing to Next Oldest Sibling 18 Months or Less	19 to 30 Months	More than 30 Months
0	0%	17%	26%
1	17%	20%	17%
2	0%	30%	11%
3	33%	0%	25%
4 or More	50%	33%	21%
	100%	100%	100%

Chi-Square (8 df) = 19.32

Probability Less than .02

In Table XI-2 the effect of spacing to the next oldest sibling is seen to be quite powerful among these small family children. While some 50 percent of the closely spaced children belonged to four or more teams, only some 21 percent of the more distantly spaced children did. For the three spacing groups, the mean numbers of team memberships were 3.2, 2.1, and 2.0 for the closely spaced, medium spaced, and distantly spaced groups respectively.

When the analyses were conducted with the spacing to the next youngest sibling measure there were no significant spacing effects for either the total sample nor for the large or the small family children analyzed separately.

Membership in Clubs and Child Spacing

Another measure used for social participation was the extent of participation in social clubs. There was a tendency for there to be a spacing effect on this dimension, though the significance was only at the .08 level. Table XI-3 gives the data.

Table XI-3

Degree of Participation in Social Clubs by Spacing to Next Youngest

Total Sample

Participation	18 Months or Less	19 to 30 Months	More Than 30 Months
Not a member or a member but not very active	82%	80%	72%
Fairly active	18%	20%	28%
	100%	100%	100%

Chi-Square (2 df) = 4.83

Probability less than .08

In this table there was a clear tendency for children with very distant spacing to be more active in social clubs. While some 18 percent of the closely spaced children were fairly active or more active, some 28 percent of the distantly spaced children were. The spacing index used was the spacing to the next youngest sibling. When the spacing to the next oldest sibling was used there were no significant results. The near-significant trend exhibited in Table XI-3 had a gamma coefficient of +.20 which indicates a moderately strong effect.

This relationship was examined further by examining the spacing and social participation effect in the four separate sex by religious groups.

When this was done it was found that the spacing effect was significant and quite powerful in one of these four groups, that of the Catholic Boys. These data were presented in Table XI-4.

Table XI-4

Degree of Participation in Clubs by Spacing to Next Youngest Sibling

Catholic Boys

Extent of Participation	Spacing to Next Youngest Sibling 18 Months or Less	19 to 30 Months	More than 30 Months
Not a member or a member but not very active	82%	84%	70%
Fairly active	15%	5%	28%
Very active	3%	11%	2%

Chi-Square (4 df) = 10.22

Probability less than .05

In this group there was a tendency for the most closely spaced children to be less active in clubs than were the medium and distantly spaced. While some 18 percent of the closely spaced children were fairly or actively involved in clubs, some 30 percent of the more distantly spaced were.

Number of Best Friends in School by Child Spacing

A Chi-Square analysis was conducted of the spacing effect on the number of best friends a child had in school as another measure of social participation. This analysis was carried out for the four separate sex by religious groups and a quite significant effect was found for one of the four groups, the Non-Catholic girls. These results are presented in Table XI-5. Again the measure of spacing used was the spacing to next youngest sibling. As can be seen from Table XI-5, those girls who were most distantly spaced, tended to have more friends in school. The children with intermediate spacings to next youngest sibling actually had the fewest friends in school. The mean number of friends for the three spacing categories, close, intermediate and distant, were 3.5, 2.9, and 3.3 respectively.

Table XI-5

Number of Best Friends at the Same School by Spacing to the Next Youngest Sibling for Non-Catholic Girls

	Spacing to Next Youngest Sibling		
Number of Best Friends in School	18 Months or Less	19 to 30 Months	More than 30 Months
Zero and One	12%	23%	24%
Two	8%	6%	14%
Three	27%	39%	7%
Four	23%	19%	19%
Five or More	31%	13%	37%

Chi-Square (8 df) = 18.22

Probability less than .02

Summary of Social Participation and Child-Spacing

The spacing issue could only be examined in the Boston Suburban sample since the relevant questions which would have allowed spacing indices to be constructed were not asked in the 1968 data collection in Puerto Rico. On the whole, the spacing effects were found to be less powerful in the social participation area than the family size effects had been.

The relationship between spacing between children was coded in two ways, spacing to next youngest sibling and spacing to next oldest sibling. These two indices were analysed only for the children for whom the respective index was meaningful. For example children who were first-born would not have a spacing to next oldest and would be omitted from those analyses while children who were last born would be omitted from analyses using the spacing to next youngest measure.

With respect to social participaton it was found that there was a significant spacing to next oldest effect on the number of athletic memberships. In general, the closer the spacing to the next oldest sibling, the more the child participated in athletic teams. When this relationship was further specified by family size it was found that the spacing to next oldest effect on athletic team membership was quite strong for the small family children but considerably less powerful for the large family children.

The next social participation measure, intensity of involvement in social clubs, was found to be affected by spacing to next youngest. This effect was only near to significant (p less than .08), but the gamma was .20 indicating a reasonable size for the effect. In general, the more distant from the next youngest sibling a child was spaced, the more they were involved in social clubs. When this effect was further specified by religion and sex, it was found to be strongest for the Catholic boys and less strong for the other three groups.

A curvilinear spacing effect was found for the social participation measure of number of best friends in school. The children with middle distances to the next youngest sibling (19 to 30 months) were less likely to have a large number of friends in school than were children who were closely spaced or distantly spaced to their next youngest sibling. This effect was significant only for the Catholic girls group.

As with family size, it is interesting that the spacing effects for athletic memberships are quite different than for the other social participation indices. In general, close spacing to an older child leads to greater athletic involvement while distant spacing to a younger child leads to greater involvement in clubs and other outside the family social activities.

B. Intellectual and Cognitive Variables and Child Spacing

A review of the literature revealed a dearth of studies dealing with the effects of child spacings on children. Koch (1954) was one of the first investigators to be interested in the association of spacing patterns and sex of siblings on the cognitive abilities of children. Using six year olds she included the eight possible sibling positions in two-child families with sibling spacings of 0-2 years, 3-4 years, and 5-6 years. She found that long spacing was favorable for the cognitive development of males while close spacing was favorable for females. She also found that girls with brothers achieved higher scores on intellectual performances than did girls with sisters, while boys in general were not affected by the sex of their siblings.

Rosenberg, Goldman and Sutton-Smith (1960) replicated Koch's study using 4th, 5th, and 6th graders in two-child families and using age spacing between siblings from one to six years. They obtained essentially the same results. Their results indicated that for females, having a male sibling close in age led to higher intelligence, whereas having a female sib close in age had the opposite effect. However, a replication of the study by Rosenberg and Sutton-Smith (1969) with male and female undergraduates obtained contradictory results. In young adulthood the favorable effect on males of being first born and having large age spacings was still influential but for females ordinal position was not significant and like-sex siblings and closer age spacing were more favorable. Rosenberg and Sutton-Smith did not suggest reasons for the different results of the interaction of sex of sibling and spacing on intellectual development for the two different age groups.

Hypotheses

It was predicted that first born boys from small and well spaced families would tend to be more intelligent and better school achievers than are boys from closely spaced families of either large or small size. It was predicted that spacing would be a more important factor in small families than in large families.

Intelligence and Child-Spacing

When the spacing to next youngest was related to the measured intelligence of the children there was a significant effect. This data is presented in Table XI-6. In this table the children from large and from small families are combined. When the family sizes were analyzed separately it was found that the spacing effect on intelligence was significant only for the large family children. This data is presented in Table XI-7.

While the effect of spacing to next youngest was significant on intelligence, the relationship was not linear. The significant effect was due to an unusually high proportion of children of medium spacing in the lower intelligence ranges. With this population of children, almost all of whom were of at least average intelligence, the lowest intelligence category ranged from 80 to 105 and many of the children with intermediate spacings.

had scores in this range. As many as twice as many children (see Table XI-6) from the middle spacing group as from the most distantly spaced group (32 percent to 14 percent) fell in this lowest IQ range. Thus the, somewhat unexpected outcome was that the oldest child of a pair was somewhat more intelligent when there was considerable distance between that child and the next youngest. On the other hand when there was between 19 and 30 months separation to the next youngest child, the older child was likely to be somewhat less intelligent. This effect was more significant in the large families than in the small families, but if the percents in Table XI-7 are compared, they are very similar.

Table XI-6

Intelligence by Spacing to the Next Youngest Sibling All Children

	Spacing to Next Youngest Sibling		
Intelligence Quotient Ranges	18 Months or Less (N=48)	19 to 30 Months (N=59)	More than 30 Months (N=129)
80 - 105	21%	32%	14%
110 - 120	54%	34%	51%
Above 120	25%	34%	35%
	100%	100%	100%

Chi-Square (4 df) = 11.00

Probability less than .05

Table XI-7

Intelligence by Spacing to Next Youngest Sibling by Family Size

	Spacing to Next Youngest Sibling		
Intelligence Quotient Ranges	18 Months or Less	19 to 30 Months	Mor than 30 Months
	Large Family Children		
	(N=42)	(N=46)	(N=68)
80 - 105	21%	33%	18%
110 - 120	55%	30%	50%
Above 120	23%	37%	32%
	99%	100%	100%
	Chi-Square (4 df) = 13.42, Probability less than .05		
	Small Family Children		
	(N=6)	(N=13)	(N=61)
80 - 105	17%	30%	10%
110 - 120	50%	46%	52%
Above 120	34%	23%	38%
	101%	99%	100%
	Chi-Square (4 df) = 4.20, Probability Not Significant		

The spacing effect on intelligence was next examined using the spacing measure of spacing to the next oldest child. Again it was found that there was a significant spacing effect for children from both family sizes taken together. These results are presented in Table XI-8. The analyses for the small and large family children separately found that the effect was not significant for the small families and was significant for the large families. This data is presented in Table XI-9.

Table XI-8

Intelligence by Spacing to Next Oldest Child, All Children

	Spacing to Next Oldest Sibling		
Intelligence Quotient Ranges	18 Months or Less (N=47)	19 to 30 m Months (N=49)	More than 30 Months (N=100)
80 - 105	36%	16%	20%
110 - 120	49%	41%	48%
Above 120	15%	43%	32%
	100%	100%	100%

Chi-Square (4 df) = 11.60

Probability less than .05

It is interesting to compare Table XI-8 with Table XI-6. In both tables the major contrast is between the medium spaced children and the closely spaced and the distantly spaced children. However the effects are in the opposite directions. For the spacing to the next oldest child, reported in Table XI-8, the middle spaced child tended to be more intelligent than the more closely spaced children and also somewhat more intelligent than the distantly spaced children. On the other hand when we are looking at the older child and asking about the spacing to the next youngest child, as in Table XI-6, it was the middle spaced child who tended to be less intelligent than those with close or more distant spacing.

In Table XI-8, the major effect is on the child who is closely spaced behind the next oldest child. This close spacing to the next oldest child seems to have quite a negative effect on intelligence. In this sample those children who had an older sibling less than 30 months older, only 15 percent of them had IQs above 120. In contrast, 43 percent of those children whose next oldest sibling was between 18 and 27 months older had IQs above 120.

These results seem to indicate that the optimum spacing for the younger child is between 19 and 30 months, and that such spacing will considerably aid the child's intelligence as measured by standardized tests. On the other hand, from Table XI-6, we see that such spacing will also tend to have a negative effect on the intelligence of some of the older children. Thus one spacing interval is not equally good for the older as for the younger child. For the intelligence of the older child, as indicated in Table XI-6, the optimum spacing is more than 30 months.

Due to small sample sizes, it was not possible to examine all three spacing categories in the small family children. Table XI-9 presents the analyses for the small and for the large family children separately. It was necessary to combine the two shortest spacing to next oldest categories for the small family children. The spacing to next oldest effect was not significant for the small families but was quite significant for the large families. For the small families, children with spacings less than 30 months tended to be more intelligent while for the large families children with spacings to the next oldest of between 19 and 30 months tended to be most intelligent.

Table XI-9

Intelligence by Spacing to Next Oldest for Small and Large Family Children

	Small Families		Large Families		
Intelligence	30 or Less	31+	18 or less	19 - 30	31+
Quotient Ranges	(N=15)	(N=51)	(N=45)	(N=35)	(N=49)
80 - 105	7%	25%	36%	20%	14%
110 - 120	47%	47%	51%	37%	49%
Above 120	47%	27%	13%	43%	37%

Chi-Square (2 df) = 3.28 | Chi-Square (4 df) = 12.49
Probability Not Significant | Probability less than .02

Summary of Child Spacing Effects on Intelligence

This research has found that child spacing is related to intelligence of the child. These effects were significant for all children, regardless of family size. However when the analyses were conducted separetely for small family and for large family children they were significant only for the large family children. Children who had a younger sibling tended to have higher intelligences when that younger sibling was spaced more than 30 months younger. On the other hand when a child had an older sibling, the child tended to be more intelligent if that next older child was spaced at least 19 months older and preferably no more than 30 months older. Thus it was better for the older child if the next younger child was rather distantly (more than 30 months) spaced while it was better for the younger child if the next oldest sibling was moderately spaced (19 to 30 months) older. For the younger child, being spaced less than 19 months from an older sibling was clearly detrimental to intelligence. Such close spacing did not help the older child either. Thus as far as the development of intelligence goes, close spacing (less than 18 months) is detrimental to both the older and to the younger child.

C. College And Occupational Aspirations and Child Spacing

The plans of a student to attend college and the level of occupation aimed for were related to the two spacing indices. In general it was predicted that children with wide spacing would be more advantaged in these aspirations than would more closely spaced children.

Plans to Go to College and Child Spacing

The certainty with which a student plans to attend college right after high school was related to the spacing to the next youngest child for the entire sample. The data are presented in Table XI-10.

Table XI-10

College Plans by Spacing to Next Youngest Child, All Children

	Spacing to Next Youngest Sibling		
Plans to Go to College	18 Months or Less (N=120)	19 to 30 Months (N=130)	More than 30 Months (N=203)
Not Definite	35%	40%	27%
Right After High School	65%	60%	73%
	100%	100%	100%

Chi-Square (2 df) = 6.87

Probability less than .05

As can be seen in this table, the children with more than 30 months separating them from their next youngest sibling were more likely to have had definite plans to attend college right after high school. When this relationship was examined separately for small and for large family children, this spacing effect was found to be essentailly non-existent for the large family children but to be quite powerful for the small family children. Thus for the small family children, the percentages of children planning to go to college right after high school for the three spacing categories were 65, 60 and 82 percents respectively. This relationship was significant beyond the .02 level. Thus in small families, having children closely spaced reduced the college plans of the oldest child.

There was no significant effect on college plans for the spacing to next oldest measure.

Importance of Getting a Job by Child Spacing

One measure of liking for school was a question asking the child how important it was for him or her to get a job. Stating that it was unimportant to get a job now was taken as an indication of prefering to stay in school. This measure was related to the separation from the next oldest sibling for the entire sample. This data is presented in Table XI-11.

Table XI-11

Importance of Getting a Job Now by Spacing to Next Oldest Sibling - All Children

	Spacing to Next Oldest Sibling		
Importance of Getting a Job Now	18 Months or Less (N=94)	19 to 30 Months (N=120)	More than 30 Months (N=144)
Extremely to Important	79%	61%	66%
Not Important or Unimportant	21%	39%	34%
	100%	100%	100%

Chi-Square (2 df) = 7.99
Probability less than .02

Children who were widely spaced from their next oldest sibling, were much less oriented to getting out of school and getting a job now than were children who were more closely spaced. For children whose next oldest sibling was less than 19 months older only 21 percent were clearly oriented away from obtaining a job while for children with at least 31 months separating them from an older sibling, some 34 percent were clearly oriented away from getting a job now.

When the analysis was done separately by family size, the effect was powerful and significant for the large family children and was not significant for the small family children. Table XI-12 gives the data for the large family children.

Table XI-12

Importance of Getting a Job Now by Spacing to Next Oldest Sibling

Large Family Children

	Spacing to Next Oldest Sibling		
Importance of Getting a Job Now	18 Months or Less (N=88)	19 to 30 Months (N=90)	More than 30 Months (N=70)
Extremely to Important	78%	60%	69%
Not Important or Unimportant	22%	40%	31%
	100%	100%	100%

Chi-Square (2 df) = 7.05

Probability less than .03

The major effect seen in Table XI-12, as in Table XI-11, is the relative greater emphasis given by the children with very close spacings to the next oldest child to getting a job now rather than continue in school.

Occupational Aspirations by Child Spacing

Each child was presented with a list of some seventy occupations and asked to pick which came closest to the occupation he or she hoped to follow. A child was allowed to write in an occupation if the one they were planning was not on the list. Each occupation was then coded on a social status scale with seven being the highest level and one being the lowest level . For purposes of analysis, the occupational aspirations were dichotomized into those coded five and above and those coded four and below. There was a significant spacing effect for the spacing to the next oldest child for the entire sample. This data is presented in Table XI-13.

Table XI-13

Occupational Aspiration and Spacing to Next Oldest Sibling

All Children

Occupational Level Aspired To	Spacing to Next Oldest Sibling 18 Months or Less (N=81)	19 to 30 Months (N=106)	More than 30 Months (N=127)
4 or less	24%	34%	43%
5 or more	76%	66%	57%
	100%	100%	100%

Chi-Square (2 df) = 8.64

Probability less than .02

When the analysis for occupational aspiration as related to the spacing to the next oldest sibling was examined in the two family sizes separately, it was found to be significant in both. For the small family children, the percentages aspiring to occupations rated five or above for the three spacings (18 or less, 19 to 30, and more than 30 months) were 100, 88 and 60 percent respectively. For the large family children the same percentages were 75, 60, and 53 respectively. The effect was significant beyond the .01 level for the small family children and beyond the .03 level for the large family children.

These results indicate that the more closely spaced a younger child was to the next oldest sibling, ,the higher his or her occupational aspirations.

Summary of College and Occupational Aspirations by Child Spacing

This section has examined college plans, orientation toward getting a job now and level of occupation aspired to by spacing. It was found that college plans were related to the spacing to the next youngest child but not to spacing to the next oldest child. In general, children with quite distant spacing to the next youngest child are more definite in their plans to attend college right after high school than are children with very close or moderate spacings. The effect was significant for all children taken together and for the two-child family children when analyzed separately but not for the large family children.

The two job related measures, the importance of getting a job now and the status level of the occupation eventually aspired to, were related to the spacing to the next oldest sibling, but not to the spacing to the next youngest measure. The more closely spaced younger children who were more oriented toward getting a job now, also had the highest occupational aspirations. In this sample then, children who were closely spaced behind an older child were more oriented toward working and were also aiming for higher prestige occupations. The spacing effect was significant for the importance of getting a job now for the entire sample and for the large family children but not for the small family children. On the other hand the spacing effect on occupational aspiration was not only significant for the total sample, but also for both the large and for the small family children.

D. Test of Effective Academic Motivation by Child Spacing

Gene M. Smith of Harvard Medical School has developed an instrument which he calls the Test for Effective Academic Motivation or TEAM. This instrument yields eight factors, each of which is related to academic achievement. The correlations of these measures to grade point average and their intercorrelations were reported in an earlier chapter. To study the effects of child spacing on these measures of academic motivation the multivariate analysis of variance procedure was used.

Spacing to the Next Youngest Sibling and TEAM Measures

A multivariate analysis of variance with the eight TEAM measures as the dependent variables and with family size and spacing to the next youngest as independent variables was conducted. The spacing categories were: Close (18 months or less), Medium (19 to 30 months), and Long (more than 30 months). There was a significant interaction (p less than .02) between the two independent variables so that the analyses were conducted separately for each family size group.

For the small families there was no significant multivariate effect of spacing to the next youngest on the TEAM meausres. However, there was a significant univariate effect on the factor of Feels Capable. For this significant effect, the spacing group which felt least capable were those with medium spacings to the next youngest child. The mean scores for the close, medium and distant spacings for the small family children on the Feels Capable factor were 286, 270, and 295 respectively with a standard deviation estimated at about 42.

For this same group of small family children, a non-significant trend was observed with the same curvilinear pattern for the Self-Sufficient Team factor.

When the analysis was done among only the large family children their multivariate significance was only at a non-significant .15 level. However two of the TEAM factors, Obedient and Works Hard displayed non-significant trends (p less than .09 and .06 respectively). In each case, the relationship was curvilinear with the medium spaced (19 to 30 months) scoring lower than those whose spacing to the next youngest sibling was either very close or very distant.

Spacing to Next Oldest Sibling and TEAM Measures

When the multivariate analysis of variance was conducted with family size and spacing to next oldest sibling as independent factors and the eight TEAM measures as dependent variables there was no significant interaction and the spacing effect was significant (p less than .009). There was, however, only one TEAM factor which was significant in the univariate analyses, that of Self Sufficient. This was significant at the .009 level. In addition there were non-significant trends for Feels Valued, Obedient, and for Ambitious. The means for the eight TEAM factors for the three spacing to next oldest sibling categories are presented in Table XI-14.

Table XI-14

Means for TEAM Factors on Three Spacing to Next Oldest Categories

TEAM Factor Names	Spacing to Next Oldest Sibling 18 months or less (N=92)	19 to 30 Months (N=114)	More than 30 Months (N=141)	Univariate Significance Level	Stepdown F Significance
Feels Valued	302	300	311	.18	.18
Obedient	262	253	253	.17	.07
Works Hard	275	269	273	.53	.92
Feels Capable	267	274	268	.26	.01
Confident Academically	266	269	266	.37	.27
Self-Sufficient	268	264	256	.01	.01
Likes School	265	261	258	.58	.94
Ambitious	301	300	311	.20	.24

The factor which was significant, Self-Sufficient, indicates a clear trend with the more distantly spaced to the next oldest sibling children being less self-sufficient than were the children who were very closely spaced behind an older sibling. The standard deviation for self-sufficient was 38 so the difference between the most distantly spaced and the most closely spaced children was about a third of a standard deviation.

The multivariate step-down F in the last column gives a measure of the significance of the spacing effect on each TEAM factor while controlling on the TEAM factors which are above it in the list. This column indicates that Obedient and Feels Capable exhibit some spacing effect as well as Self-Sufficient. For Obedient, the closely spaced children were more Obedient than the middle or more distantly spaced children. On the other hand, it is the middle spaced children who were more likely to Feel Capable.

When the multivariate analysis of variance was conducted on only the small family children, it failed to achieve significance. However when the analysis was conducted on only the large family children it was significant at the .01 level. Thus the significant effect for the whole sample was due mainly to the power of the spacing to next oldest effect among the large family children.

The results for the large family children in terms of mean levels for each of the eight TEAM factors are presented in Table XI-15.

Table XI-15

Means for TEAM Factors on Spacing to Next Oldest Categories

Large Family Children

Spacing to Next Oldest Sibling

TEAM Factor Names	18 Months or Less (N=86)	19 to 30 Months (N=88)	More than 30 Months (N=69)	Univariate Significance Level	Stepdown F Significance
Feels Valued	302	298	311	.13	.13
Obedient	263	251	252	.12	.06
Works Hard	275	269	272	.53	.66
Feels Capable	265	273	263	.31	.01
Confident Academically	263	266	257	.48	.51
Self-Sufficient	267	264	249	.01	.01
Likes School	265	262	256	.43	.61
Ambitious	300	300	310	.24	.39

As with the entire sample, being quite a distance behind the next oldest child was linked to being less Self-Sufficient. Being closely spaced to the next oldest was linked to being more Obedient while having a middle spacing was linked to higher degrees of Feeling Capable. There is also some indication that more distantly spaced children Felt more Valued.

Summary of TEAM by Child-Spacing Effects

There were essentially no significant effects of the Spacing to Next Youngest measure with the TEAM factors taken as a whole. However the Feels Capable factor was significant in the univariate analyses. The middle spaced children Felt less Capable than did either closely spaced or distantly spaced children.

For the Spacing to Next Oldest measure there were clear effects on the TEAM factors. The effect was significant for the entire sample and for the large family children but not for the small family children. One TEAM factor had a highly significant effect and two others became almost significant ($p = .06$) or significant when the step-down F procedure was used.

The main findings were that when a child was closely spaced behind the next oldest child there was a tendency to be more Obedient. Children who had medium spacing tended to Feel more Capable. Finally, children who were distantly spaced behind the next oldest child felt less Self-Sufficient.

E. Personality Measures and Child Spacing

The major personality instrument used in this study was the Cattell High School Personality Questionnaire. This HSPQ instrument produces fourteen factors or personality scales, with one of them, Factor B being a ten item vocabulary test measure of intelligence.

Multivariate analyses of variance were conducted separately for children from the two family sizes with the spacing indices as independent variables (only one at a time) and the fourteen HSPQ personality factors as dependent variables.

Personality Effects of Spacing Among Large Family Children

For the large family children, spacing to the next youngest was significantly related to personality as measured by the HSPQ. The level of significance was better than .03. Three of the HSPQ factors were related to spacing to the next youngest among the large family children. They were: Excitability (Factor D), Willpower (Factor Q3) and Tension (Factor Q4). In a large family, the closer the distance to the next youngest child, the more excitable, more controlled, and more tense the older child was.

When spacing to the next oldest sibling was examined for the large family children, it too was significantly (.04 level) related to the HSPQ personality factors. The greater the distance between the younger child and the next oldest child, the more intelligent, more happy-go-lucky, more controlled and more affected by feelings the younger child was. These were the factors B (Intelligence), C (Ego-Strength), F (Enthusiasm), and Q3 (Willpower). Those children in a large family who had older siblings less than 19 months older than themselves tended to be less intelligent, more emotionally stable, more sober and serious and yet more careless of protocol than children with more spacing between themselves and their older siblings.

The findings with the HSPQ, Factor B, Intelligence, were checked with the far more reliable intelligence test scores obtained from the school records. The results held up. A one-way analysis of variance with spacing to the next oldest as the independent variable and intelligence from the school records as the dependent variable was significant beyond the .001 level. The relationship again was linear with the more closely spaced children being less intelligent than the more distantly spaced children.

Several possible reasons may be given to explain why closely spaced younger children do not perform as well in cognitive tasks as do distantly spaced younger children. One argument is that when children are closely spaced, their intellectual development can be hampered by intrauterine effects caused by the short interval between pregnancies. Another argument poses that the closer the spacing, the less time the mother has to spend with each child. This reduction in verbal interaction between the mother and the younger child would reduce the child's verbal capability later.

A third argument proposes that the eldest of two closely spaced children tends to become the spokesman for the two, decreasing the need for and the opportunity for the younger of the two to develop verbal expression, especially verbal interaction with adults.

Personality Effects of Spacing Among Small Family Children

Among small families, neither spacing to the next oldest, nor spacing to the next youngest was significantly related to personality as measured by the HSPQ.

Other Personality Measures and Spacing Effects

When the spacing to next oldest and spacing to next youngest sibling measures were tested for small and for large families separately, neither spacing measure in either size family had a significant multivariate analyis of variance effect on the personality scales of Dogmatism, Social Desirability, Test Anxiety, or Intellectual Achievement Responsibility.

However there was a significant effect (.05 level) for spacing to the next youngest sibling among large family children on the F-scale of authoritarianism. The relationship was linear; the closer the next youngest child was, the more authoritarian the older child became. A similar effect was not present for spacing to the next oldest child.

Summary of Spacing Effects on Personality

Spacing yielded some interesting findings in the personality realm. Among large family children who were closely spaced, the older child of the pair tended to be more authoritarian while the younger child of the pair tended to be less intelligent, more sober, more emotionally stable, and more careless of protocol.

Among small family children there were no significant spacing effects.

F. Parent-Child Relationships by Child Spacing

It was hypothesized that parent-child relationships would be affected by family size and spacing. The parent-child relationships area was measured with Schaefer's Children's Report of Parental Behavior Inventory (CRPBI). This instrument consists of twenty six scales for mothers and a similar number for fathers. Factor analyses were conducted and reduced these scales to three factors. The factors were named: Hostile Psychological Control, Acceptance, and Laxity of Discipline. There were three factors for each parent, thus giving six parent-child relationship factors as the dependent variables for the analyses reported in this section.

Hypotheses

It was expected that parents of small, well spaced families would tend to be more consistently acceptant of their children, more autonomy granting, and lax rather than firm in their control. These parents were thought to have very likely planned the number and spacing of their children in order to be able to accomplish other goals in life, and being successful in their family planning would tend to be happy with their children and their family life.

Small family parents with closely spaced children were expected to follow the same pattern described previously for the distantly spaced small families except that they were not expected to be as acceptant of their children as were the more distantly spaced parents.

For the large families, it was predicted that the parents of more distantly spaced children would tend to be more acceptant of their children than would those parents of more closely spaced families. Parents of large families, especially if they were not deeply religious Catholics, were expected to be more rejectant and more hostile psychologically controlling of their children than would be parents of large but more distantly spaced children.

Children's Report of Parental Behavior Inventory and Child Spacing

Two measures of spacing were used: Spacing to the Next Oldest Sibling and Spacing to the Next Youngest Sibling. Separate multivariate analyses of variance were conducted with an index of spacing as the independent variable and the six CRPBI factors (three for each parent) as dependent variables for each of the two family sizes. This gave four separate multivariate analyses of variance. The spacing indices were categorized as Close (18 months or less), Middle (19 to 30 months) and Distant (more than 30 months).

The basic findings for these four multivariate analyses are presented in Table XI-16. In this table the spacing effects are presented in terms of standard deviation units. Thus a mumber such as .12 means that the mean for that spacing group was .12 standard deviation units above the grand mean, while an effect of -.22 indicates that a spacing group had a mean .22 standard deviations below the mean. In these analyses the mean is that for the entire population and each row does not necessarily sum to 0.00.

Table XI-16

Spacing Effects on CRPBI Factors in Standard Deviation Units

CRPBI Factors	Child Spacing Categories 18 Months or Less	19 to 30 Months	More than 30 Months	
LARGE FAMILY				
Space to Next Oldest Sibling				
Mother's Hostile Psych. Control	.12	-.22	.10	**
Mother's Acceptance	.00	-.00	-.00	
Mother's Laxity of Discipline	-.24	.12	.12	**
Father's Hostile Psych. Control	.00	-.04	.04	
Father's Acceptance	-.02	.05	-.02	
Father's Laxity of Discipline	-.23	.11	.13	**
Space to Next Youngest Sibling				
Mother's Hostile Psych. Control	.11	-.10	-.01	
Mother's Acceptance	.06	-.02	-.05	
Mother's Laxity of Discipline	.04	-.06	.10	
Father's Hostile Psych. Control	.00	.05	-.05	
Father's Acceptance	.17	-.03	-.13	*
Father's Laxity of Discipline	.07	-.15	.08	
SMALL FAMILY				
Space to Next Oldest Sibling				
Mother's Hostile Psych. Control	-.12	.18	-.05	
Mother's Acceptance	-.53	.09	.44	*
Mother's Laxity of Discipline	.13	.07	-.20	
Father's Hostile Psych. Control	-.33	.28	.06	
Father's Acceptance	-.02	-.24	.25	*
Father's Laxity of Discipline	.42	-.34	-.07	
Space to Next Youngest Sibling				
Mother's Hostile Psych. Control	-.09	-.00	.10	
Mother's Acceptance	.17	.07	-.24	
Mother's Laxity of Discipline	.07	-.09	.02	
Father's Hostile Psych. Control	-.15	.07	.08	
Father's Acceptance	.15	-.01	-.14	
Father's Laxity of Discipline	.04	-.10	.05	

* Probability less than .10 level.
** Probability less than .05 level.
*** Probability less than .01 level.

Large Family and Spacing to Next Oldest Sibling

The multivariate significance for the large families with Spacing to the Next Oldest Sibling independent variable was at the .10 level. When the individual factors were examined, three of the six CRPBI factors were significant. This is indicated in Table XI-16 by the asterisks at the end of the line of spacing effects for these three CRPBI factors.

In the large family, spacing to next oldest analysis it was found that children of middle distance to the next oldest sibling tended to perceive their mother as using less Hostile Psychological Control.Large family children with either close or distant spacing to the next oldest child felt that their mothers used more Hostile Psychological Control. However, those closely spaced to the next oldest child in these large families found their mothers giving them much more Firm Discipline. Mothers of children of middle and distant spacing to the next oldest child tended to be more Lax in their Discipline. This same effect was also true for the fathers of children closely spaced to next oldest sibling.

Thus among the large family children, a child who was closely spaced behind an older child was likely to feel that both parents tended to be more firm disciplinarians while the middle distance children felt lesser levels of their mother's hostile psychological control.

Large Family and Spacing to Next Youngest Sibling

The significance of the multivariate analysis of variance for the large family children with the spacing to the next youngest sibling measure was also at the .10 level. One CRPBI factor, Father's Acceptance, was significant at the .10 level for the univariate analyses. There was some indication from these results that children distantly spaced from the next youngest child were less accepted by their fathers than were children who were the oldest of two closely spaced children.

Small Family Children and Spacing to the Next Oldest Sibling

The effect of child-spacing as indexed by Spacing to the Next Oldest Sibling was significant beyond the .03 level in a multivariate analysis of variance with the six CRPBI factors as dependent variables. Two of the CRPBI factors were significant in the univariate analyses beyond the .10 level, and in the step-down F analysis an additional CRPBI factor was significant at the .01 level.

The results indicated that among these two-child family children the youngest child was significantly less Accepted by either parent when he or she was closely spaced to the next oldest sibling than when there was more than 30 months difference between the ages of the younger and older children.

Using the step-down F procedure it was found that when the other five CRPBI factors were controlled, fathers were much more Lax in their Discipline with the children closely spaced to the next oldest sibling than with the children intermediately spaced.

Small Family Children and Spacing to the Next Youngest Sibling

When the child-spacing measure of Spacing to the Next Youngest was used there were no significant results, even at the .10 level, for the small family children.

Sibling Position and Children's Report of Parental Behavior

Somewhat related to child-spacing is the actual sibling position which a child has. It was decided to examine the effect on the parent-child relationships of sibling position. In these analyses multivariate analyses of variance were conducted with the independent variable being sibling position and the dependent variables being the six CRPBI factors. These analyses were conducted for large family boys, large family girls, small family boys and small family girls in separate analyses. The standard deviation unit effects of sibling position on the CRPBI factors are reported in Table XI-17.

Table XI-17

Sibling Position Effects on CRPBI Factors in Standard Deviation Units

	Sibling Position			
CRPBI Factors	First Born	Middle	Last Born	
LARGE FAMILY BOYS				
Mother's Hostile Psych. Control	.10	-.02	.08	
Mother's Acceptance	.06	.02	-.08	
Mother's Laxity of Discipline	-.19	.08	.11	
Father's Hostile Psych. Control	-.20	-.10	.30	
Father's Acceptance	.41	-.15	-.26	**
Father's Laxity of Discipline	-.07	.09	-.02	
LARGE FAMILY GIRLS				
Mother's Hostile Psych. Control	.07	.07	-.14	
Mother's Acceptance	.20	-.16	-.04	
Mother's Laxity of Discipline	-.16	-.29	.45	*
Father's Hostile Psych. Control	.29	-.16	-.13	*
Father's Acceptance	.21	-.11	-.10	
Father's Laxity of Discipline	-.48	-.20	.68	***
SMALL FAMILY BOYS				
Mother's Hostile Psych. Control	-.00		.00	
Mother's Acceptance	.18		-.18	*
Mother's Laxity of Discipline	-.26		.26	***
Father's Hostile Psych. Control	.14		-.14	
Father's Acceptance	.10		-.10	
Father's Laxity of Discipline	-.24		.24	**
SMALL FAMILY GIRLS				
Mother's Hostile Psych. Control	-.13		.13	
Mother's Acceptance	.03		-.03	
Mother's Laxity of Discipline	-.06		.06	
Father's Hostile Psych. Control	-.11		.11	
Father's Acceptance	-.02		.02	
Father's Laxity of Discipline	-.15		.15	*

* Probability less than .10
** Probability less than .05
*** Probability less than .01

The multivariate analysis of variance for large family boys was not significant ($p = .357$) but there was one univariate effect significant beyond the .05 level. Among these large family children, it seemed that the first born boys felt more accepted by their fathers than last born or middle born boys.

For the large family girls there was a multivariate significance beyond the .003 level. Three factors had some univariate significance. In these large families, first born and middle born girls felt much more strictly disciplined by their fathers and probably by their mothers as well while the last born girls felt that they were disciplined more laxly. However, first born daughters perceived their fathers as using higher levels of hostile psychological control than daughters of other sibling positions in these large families.

The multivariate analysis of variance for small family boys indicated that sibling position effects affected the parent-child relationship beyond the .01 level of significance. First born boys felt disciplined much more strictly than were last born boys by both mothers and fathers in these two-child families. The mothers of the first born boys were perceived as more acceptant of their children than were the mothers of last born boys.

For the small family girls, the multivariate analysis of variance was significant at only the .17 level and only one CRPBI factor showed a trend at beyond the .10 level. In these small families there was some indication that the first born girls were more strictly disciplined than last born girls.

Summary of Children's Report of Parental Behavior Results

The Schaefer Children's Report of Parental Behavior Inventory (CRPBI) was used to measure parent-child relationships. Three factors for mothers and three for fathers were derived from this instrument. These factors were called: Hostile Psychological Control, Acceptance, and Laxity of Discipline.

The effects of two measures of spacing on the two family sizes were examined. Among the large family children, a child who was closely spaced to his next oldest sibling was likely to perceive both parents as rather strict disciplinarians while a child with intermediate spacing was likely to feel that the mother used less Hostile Psychological Control on him or her.

For the spacing to next youngest measure, there was an indication that children who had more than 30 months separating them from the next youngest child felt themselves to be less accepted by their father than were children who were closely spaced.

Among small family children, the youngest child felt significantly less accepted by either parent when closely spaced with an older child than when the two children were spaced more than 30 months apart. There was also an indication that fathers were perceived as more strict by a child if he or she was spaced between 19 and 30 months from the oldest child, while children spaced less than 19 months to the next oldest sibling felt that they were disciplined much more laxly.

There were no effects for small family children by spacing to the next youngest sibling.

When sibling order was examined for its effects on parent-child relationships it was found that in large families, first born boys felt more accepted by their fathers than last born boys. Both parents in large families tended to be more strict in their discipline of first born girls than they were of last born girls. First born girls in these large families also reported being subject to greater use of Hostile Psychological Control methods by their fathers.

Among the small families, first born boys felt more accepted by their mothers than were last born boys. Both parents were perceived as using firmer discipline by their first born children than by their second born. Fathers were perceived to be more strict disciplinarians by their first born girls than by their last born girls.

G. Summary of the Effects of Child Spacing

Two measures of child spacing were used: Spacing to Next Oldest and Spacing to Next Youngest. These measures could not be defined on some children, for example first born children did not have a defined Spacing to Next Oldest and last born children did not have a defined Spacing to Next Youngest. Children for whom a particular measure was not defined were omitted from analyses conducted with that measure. Since some children had only one measure defined, separate analyses were done with the two child-spacing measures.

The data on child-spacing was available only for the Suburban Boston sample and all analyses reported in this chapter deal with this sample.

Children Closely Spaced to Next Oldest Child

Children who were less than 19 months younger than an older sibling displayed an interesting set of characteristics. These children were far more athletic, but less involved in social clubs than children with other spacings. They tended to be less intelligent, more interested in working than continuing in school yet somewhat more oriented toward college than middle spaced children. They were considerably more likely to be thinking of a high status occupation than more distantly spaced children.

In terms of personality and motivation, these children who were closely spaced behind an older child tended to be more obedient, more self-sufficient, to feel somewhat less capable, to be more sober and serious, yet to be less controlled and less affected by feelings than more distantly spaced children.They tended to perceive their parents as using more psychological control mechanisms on them and as subjecting them to more strict discipline when their family had more than four children.Among the two-child families, the closely spaced second born felt that his mother did not accept him or her as much as more distantly spaced second borns did.

Children Distantly Spaced to Next Oldest Child

Children who were younger than their next oldest sibling by more than 30 months tended to be rather unathletic, yet to be quite involved in social clubs. They were more likely to be highly intelligent than the closely spaced child, but not as likely to be as highly intelligent as a child spaced between 19 and 30 months younger than the next oldest child.

These distantly spaced to next oldest children were very oriented toward college right after high school, had many best friends in school and were not too interested in getting a job right now. On the other hand they tended not to have very high occupational aspirations.

These distantly spaced to next oldest children tended to not be very obedient and law abiding, did not feel as capable as middle spaced children, were not very self-sufficient, tended to be happy-go-lucky rather than sober and serious, yet also more controlled and more sensitive and affected by feelings than children of lesser spacing.

Children with more than 30 months separating them from their next oldest sibling perceived their parents as using more psychological control while intermediately spaced children felt less control. Among the large family children, these distantly spaced younger children reported both parents to be quite lax in their disciplining. In small families, , these distantly spaced second born children tended to feel very accepted by their mother and father. They were the " baby" of the family.

Children Medium Spaced to Next Oldest Child

Many of the spacing effects were curvilinear with the middle spaced child (between 19 and 30 months younger than the next oldest child) different from both more closely spaced and more distantly spaced children.

The children with middle spacing to the next oldest child tended to be more intelligent than either more closely spaced or more distantly spaced children. These children were also less interested in getting a job now and leaving school than children of other spacings. They felt more capable also than did other children. Among the large family children the mothers of the middle spaced children tended to be perceived as using less psychological control on them than the mothers of children with other spacings. These middle spaced children, as contrasted to the closely spaced children in these large families, tended to feel more laxly disciplined by both parents. Among the small family children, these middle spaced younger children tended to feel very much rejected by their parents.

Children Closely Spaced to Next Youngest Child

Children who were the older of a pair of children who were spaced less than eighteen months apart tended to be more authoritarian, less active in social clubs, yet tend to have more best friends in school than middle spaced children (only among Non-Catholic Girls), tended to be less intelligent (only among large family children), and among the large family children these closely spaced older children tended to feel more accepted by their father than were the older children with other spacings.

Children Middle Spaced to Next Youngest Child

There was a tendency, only among Catholic Boys, for children spaced 19 to 30 months older than their next youngest sibling to be more likely to be either very active or not a member at all of social clubs. Among the Non-Catholic girls group these middle spaced children tended to have fewer best friends in school than did children of other spacings. These children with middle spacing to the next youngest child were more likely to have low intelligence than children of either more distant or closer spacing. Among the large family children these middle spaced children were also more likely than other spaced children to be of high intelligence while among the small family children the middle spaced children were clearly averaging lower intelligence than children either closely spaced or distantly spaced to the next youngest child. Going along with this lower average intelligence, these middle spaced children were less oriented toward college than either the close or distantly spaced children. These medium spaced children tended to feel less capable, tended to be less obedient and law abiding and tending to be less likely to work hard than children of either more close or more distant spacings. There were no particular non-linear effects of parent-child relationships favoring or disfavoring the middle spaced child with respect to spacing to the next younger sibling.

Children Distantly Spaced to the Next Youngest Child

These children whose next youngest sibling was at least 30 months younger tended to be quite active in social clubs. Among Non-Catholic girls, these distantly spaced children tended to have more best friends in school than did middle spaced children. Children distantly spaced to the next youngest child tended to be more intelligent than children with middle or close spacing. These distantly spaced children were also more oriented toward college than were children of other spacings. These children tended to feel more capable than children of other spacings (small family children only). Among the large family children the more distantly spaced children tended to be more obedient and to work harder than did middle spaced children. In terms of personality, these distantly spaced children tended to be less excitable, less controlled, and less tense than children more closely spaced to a younger sibling (large family children only). These more distantly spaced children tended to be less authoritarian than were more closely spaced children. There was also an indication that these distantly spaced children felt less accepted by their fathers than were those children with more closely spaced younger siblings.

XII SUMMARY AND CONCLUSIONS

This monograph reports on the effects of different family sizes on both parents an on children in both the United States and Puerto Rico. The data for the Puerto Rican sample was obtained in 1968 and for the American sample in 1972-73. The Puerto Rican data was originally collected for a study of the factors other than intelligence which contribute to academic achievement. Data were collected from some 5,000 students who were enrolled in secondary public or private schools in the Bayamon Norte school district. Some 80 percent of the students enrolled in this district's secondary schools participated in some aspect of the study.

In order to use the data generated by the students in Puerto Rico to study families it was necessary to develop a family file. This was done by a procedure of sorting together children with the same last name, same mother's name, same number of children in the family and same indication of father presence or absence. These groups were assumed to be siblings and when there was more than one child in a group the younger ones were eliminated. The remaining units now consisted of "families" as represented by just one child in the data base. There were some 3,595 such units and this file was used for the data analysis of the Puerto Rican data.

No information was collected directly from the parents in Puerto Rico and information on child spacing was not available either.

In the suburban Boston sample the families were selected to have either two children, or to have five or more children. These were called the "small" families and the "large" families respectively. The Boston sample consisted of 537 families from four suburban towns in the Greater Boston area, 258 of which contained two children (small families) and 279 with five or more children (large families). The mothers were interviewed, the fathers were sent a questionnaire which covered some of the issues dealt with by the mother in her interview and the teenage child filled out a set of instruments.

The children in both Puerto Rico and in the United States were asked to fill out a common set of instruments including the following: a background questionnaire, the *Children's Test Anxiety Scale* (Sarason, Davidson, Lighthall, Waite, & Rumbush, 1960), the *Dogmatism Scale* (Rokeach, 1956; Kerlinger & Rokeach, 1966), the *F-Scale of Authoritarianism* (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950), the *High School Personality Questionnaire* (Cattell & Cattell, 1969), the *Children's Report of Parental Behavior Questionnaire* (Schaefer, 1965) in both its mother's and father's form, the *Children's Social Desirability Questionnaire* (Crandall, Crandall, & Katkovsky, 1965), and for the suburban Boston sample only, the *Test of Effective Academic Motivation* (Smith, 1974), and the *Intellectual Achievement Questionnaire* (Crandall, Katkovsky, & Crandall, 1965).

The Boston mother's interview included a *Self-esteem Scale* (1965) and a *Multi-dimensional Internal-External Control Scale* (Strumpel, 1971, Gurin, Gurin, Lao & Beattie, 1969).. An observation schedule was designed to obtain a description of the living room of the house (Laumann & House, 1970) which was filled out by the interviewers whenever the interview took place in the living room. The interviews took about ninety minutes, on the average, and measured a wide variety of aspects of family life.

A questionnaire taking about 30 minutes to complete was mailed to the fathers of the families and was the main source of information directly from them. The father's questionnaire consisted of those questions from the mother's interview for which it was judged to be most important to obtain the point of view of the father.

A comparison with the 1970 census data indicated that the obtained sample in the Boston suburbs averaged somewhat higher in socio-economic status as measured by income and education than the residents of their towns as a whole and the towns average was above the United States average. Thus the findings obtained from the Boston sample are most appropriately generalized to white upper middle class suburban families.

The participants in the Puerto Rican study lived in an area whose residents had a median income and median years of completed education just slightly lower than that of the San Juan SMSA, but much higher than the island wide medians. Bayamon is among the most urban, fastest growing, highest income, and best educated municipios in Puerto Rico. The results obtained from the Bayamon data should be generalizable to much of urban Puerto Rico in the future.

In this study the effects of family size were examined for the parents in terms of their socio-economic status, educational attainment, religion, geographic mobility, age at marriage, recreational patterns, saving and investment patterns, parent-child interactions, community participation, and family planning practices.

For the children the family size effects were examined for their academic achievement, family size preferred for their own families of procreation, expected age at marriage, personality, and motivations.

In the Suburban Boston sample it was found that religion was closely related to both family size and to child-spacing. Seventy percent of the large families and 25 percent of the small families were Catholic. Therefore, in order to differentiate family size and spacing effects from those of religion, many of the analyses were carried out separately for Catholics and Non-Catholics.

It was not necessary to separate the sample by religion in Puerto Rico since many of the families of all sizes were Catholics. In fact, in the Puerto Rican sample the Non-Catholics averaged about half a child more per family at each level of socio-economic status.

A. Family Size and Parents

In Boston, but not in Puerto Rico, the fathers of the large families had attained more education than had the fathers of small families. The reverse was true for mothers. Small family mothers had more education and were more likely to hold graduate degrees than were large family mothers. Large families tended to have larger homes than did small families, and large non-Catholic families had more valuable homes than did their small family counterparts.

The higher occupational status of the large family non-Catholic fathers was not predicted and was the opposite of what had been found in Puerto Rico. There, the higher the socio-economic status, the smaller the family. Also the effect of religion was reversed in the two samples. In Puerto Rico the non-Catholics tended to have more children while in Boston the Catholics had more.

These opposite effects led to the development of a theory that in each country, the minority religion would tend to have the higher fertility. In the United States, Catholics are in the minority, while in Puerto Rico the non-Catholics are in the minority.

The effect of socio-economic status was pictured as a U-shaped function, with fertility declining as socio-economic status increased until middle class levels are reached. Then as socio-economic status increased toward upper class occupations, fertility increased again. Since the Puerto Rican sample, when compared with the Boston sample, tended toward lower socio-economic status, the bulk of the "high" status people in Puerto Rico would be middle status. On the other hand the bulk of the "low" status people in Boston would also be middle status. The opposed findings of the two samples can fit the U-shaped hypothesis of a socio-economic status effect and a minority religion effect.

In Boston the family size affected the work force participation of the women. Large family women were considerably less likely to be working or to have worked than were small family women. Also interesting was the relationship of years of working before marriage and family size. The more years a woman had worked before marriage, the more likely she was to have only two children rather than five or more. Since marriage, the average small family mother had worked one-fourth of the time while the average large family mother had worked about one-seventh of the time. At the time of the interview, more of the small family mothers were working than were the large family mothers.

The origin and family origin of the parents was related to the number of children a family had. Small family women were more likely to be from urban areas while large family women were more likely to be from small towns. The parents of women who had only two children were more likely to have been foreign-born than were the parents of women who had five or more children. This fact affected the number of relatives living in the area, with the large families having more relatives locally.

Larger families tended to be life-long residents of the community in which they lived while the small families had been somewhat more mobile. For men who had married after the age of 30, there was a greater probability of having only two children than for men who married under age 30. Husbands who themselves came from large families, tended to father large families.

How the parents spent their leisure time was also affected by family size. Parents with small families tended to pursue activities which were more expensive or geared to adults such as attending movies, eating in restaurants, and visiting with other adults. Small family fathers were also more likely to be involved with hobbies. Large family parents were more likely to participate in pastimes which were less expensive and which could involve the whole family, such as attending or participating in sports events. The larger families also tended to have closer community ties as indicated by their greater involvement in voluntary activities.

Family size also influenced the educational aspirations which the parents had for their children. Small family parents had higher educational aspirations for their sons than did large family parents. The small family parents also had higher educational aspirations for their sons than for their daughters.

B. Child-Spacing Effects on Parents

Non-Catholic parents tended to have larger spacing between their children than did Catholics in both the large and in the small family groups. When there was larger spacing between the children, the husband seemed to be more involved in household chores, in particular with the dinner dishes. This was interpreted as a sign that the wife in the more widely spaced families tended to be more powerful in family decision-making.

Spacing also affected the leisure time activities of the parents. Fathers with more compact families were able to spend more time reading and working on hobbies than were the fathers with the more distantly spaced families.

The median child-spacing was found to be associated with a woman's concept of the best length of time between children, as well as her use of birth control methods. While 29 percent of these women whose children were very closely spaced had not used birth control, only ten percent of those with children spaced more than thirty months apart had not.

C. Family Size and Child Spacing Effects on Parent-Child Relationships

The Schaefer Children's Report of Parental Behavior Inventory (CRPBI) instrument used in this study was factor analyzed and produced three factors which were essentially identical for the mothers and for the fathers and which were also essentially the same as found in previous factor analyses of the CRPBI. These factors were called: Hostile Psychological Control, Acceptance, and Lax vs. Firm Discipline.

An examination of the individual scales indicated that most of the Hostile Psychological Control and the Acceptance factors had higher means for mothers than for fathers. Thus the children in this study tended to see their mothers as both more Accepting and as more Controlling than they saw their fathers.

There was a negative relationship (-.50 for mothers, and -.44 for fathers) between the factors of Acceptance and Hostile Psychological Control. There was also a tendency for the similar scales to be correlated between fathers and mothers. Thus the children tended to see both parents as treating them in a similar fashion. These interrelationships were .51 for Acceptance, .57 for Hostile Psychological control and .63 for Laxity of Discipline. These findings were for the Boston Suburban sample.

In a multivariate analysis of variance for the Boston data all three main effects of Family Size, Sex of Child, and Religion were significant and none of the interactions were significant in predicting the six parent-child relationship factors.

The family size effects indicated that the small family fathers were more acceptant of their children than were the fathers of large families. Girls, as contrasted to boys, tended to see their mothers as more accepting, less controlling, and yet giving them more firm discipline. Similarly the daughters saw their fathers as more accepting and less controlling than did the sons. The significant religious effect involved Catholic fathers being perceived as more firm disciplinarians than were the non-Catholic fathers. In all of these results, socio-economic status was covaried out. Socio-economic status was related to the parent-child domain in that higher income parents were seen by their children as being more acceptant. Again all these results were found with the Boston data.

The Puerto Rican data allowed a greater examination of the family size variable since it was large enough to examine ten separate family sizes, ranging from one-child families up to ten or more child families. In general, except where specifically stated, the pattern was for two and three child families to be similar, with the family size effect becoming stronger as family size increased to about the seven child family. After seven children further increases in family size did not seem to make much difference. The one-child family was almost always an anomaly in that it was generally more like a five child family than a two-child family.

In the Puerto Rican data, report of feelings of maternal and paternal acceptance decreased with increasing family size. One-child family girls felt less accepted by their fathers than were two-child family girls. On the other hand, for boys, the one-child family sons felt somewhat more accepted than two-child family sons.

For girls in this Puerto Rican data, not only were both father's and mother's perceived acceptance related to family size but reports for use of hostile psychological control methods tended to increase with family size. While boys in general perceived significantly higher levels of hostile psychological control than did girls, the trend for increased control from their parents with increased family size did not reach significance. Girls in three child families reported the lowest levels of father's use of hostile psychological control. For both boys and girls in one child families, reports of psychological control reached levels almost as high as those from the large families and considerably above the levels of the two and three-child families.

A discriminant function analysis indicated that there were two functions linking family size to the parent-child relationship factors. The first function was most related to maternal acceptance and tended to decline with increasing family size. The second function related to a contrast between father's and mother's acceptance of a child. This function coded the difference between the level of acceptance a child received from his mother and from his (or her) father. The second function increased steadily up until the six child family and then dropped precipitously. This seemed to imply that as the family size increased up to six children the father was reported as more acceptant of his children than the mother. However when family size reached seven children, the children felt less accepted by their parents than children of smaller families. This second discriminant function may indicate that, at least in Puerto Rico, fathers tend to want and accept more children up until they have as many as six children, while the average mother finds herself desiring additional children and accepting the ones she has less and less with each child beyond the first.

In general then this study has indicated that in Puerto Rico, the acceptance of children of either sex by both parents declined as family size increased. The only child who was a girl felt considerable less accepted by her father than those girls who came from two or three child families. However only children who were sons, actually felt accepted more by their fathers than sons from two-child families.

As family size increased, girls perceived greater use of hostile psychological control by both mother and father. With respect to this set of parent-child relationship dimensions, the best position for a girl was found in the two-child family.

For neither sex did the laxity of discipline factor show a significant family size effect but among the junior high school girls there was a steady and significant increase in the report of maternal laxity of discipline with increasing family size.

In general, family size seemed to affect the parent-child relationships of boys less than it did those of girls. In terms of the use of hostile psychological control, the older girls in large families seemed to have a particularly difficult time. This may be related to the cultural valuation of the proper behavior for girls. With increased family size, the proper supervision of many girls becomes more and more difficult for parents. Boys, needing less close supervision according to the cultural norms, do not suffer as much as girls from an increase in the use of hostile psychological control mechanisms as do the girls as family size increases.

D. Family Spacing Effects on Parents

As might be expected, large families had a tendency to have more children with short spacings. Using the median interchild spacing measure, almost half of the small families had their children separated by more than 36 months while less then seven percent of the large families had such large median interchild spacings. While there was no relationship between the socio-economic measures and the median interchild spacing of a family, there was an association between religion and the spacing. Both in small and in large families, Catholics tended to have shorter interchild spacings. There was some indication that as the interchild spacings increased, in both large and small families, husbands became more involved with the evening dishes.

When there were wider interchild spacings among the small family women, those with more widely spaced families tended to work somewhat more after marriage. While about 23 percent of the mothers with two children spaced less than 30 months apart worked seven or more years after marriage, some 40 percent of those with spacings of more than 30 months worked this much or more. When an index was created of the proportion of time that a woman had worked since marriage was related to median interchild spacing it was found that there was a curvilinear relationship among the small family women. Women with two children spaced less than 19 months apart worked an average of 31 percent of the time since marriage. When the interchild distance increased to between 19 and 30 months this percentage of the time working dropped to 23 percent while for those small family women with interchild separations of more than 30 months the index rose to 29 percent. Thus women with middle spaced children tended to work less than did women with closely spaced or more distantly spaced children.

As might be expected, women with their own children widely spaced felt that the ideal child spacing was relatively wide, while women with closely spaced children tended to feel that the ideal spacing was relatively short.

Among the small family mothers some 87 percent used birth control methods and, there was little variation by the spacing of the children. On the other hand among large family mothers while only 70 percent of mothers of very closely spaced families used birth control this rose to 90 percent among the large family mothers with widely spaced children.

One of the determinants of short spacing among the small families was late marriage. While only some 12 percent of the families with two children spaced more than 30 months apart came from couples who had married when the husband was over 30, some 33 percent of the two child families with spacings of less than 19 months came from these relatively late marriages.

Women who had two-children and had them widely spaced were more likely to be involved in school organizations than were women whose two children were closely spaced. Similarly, the wider the spacing, the more likely is a women to attend classes and lectures.

Among both large and small families mothers who did not work were more active in outside activities. Large family mothers whose youngest child was between the ages of seven and ten spent the most time in voluntary community activities. Small family women who had a youngest child under age ten (very few of these children were under age seven) and had larger spacing between their children spent more time involved in school organizations and in taking classes or lectures themselves. Small family women who worked full-time were more involved with active sports than were other mothers who did not work at all or who worked only part-time.

Small family fathers with children under ten spent more time with hobbies, more time swimming, picnicking, fishing, boating, hunting, camping, and skiing than did fathers with older children. When the wives of the small family husbands did not work, the men spent more time boating, swimming, and picnicking than did those men whose wives were working. Small family fathers whose children were closely spaced spent more time reading than did two-child fathers whose children were widely spaced.

Large family fathers whose youngest child was between seven and ten spent more time attending sporting events than did large family fathers with other ages for their youngest child. In these large families, if the wife worked, the husband spent more time on his hobbies but less time on swimming, boating and picnicking than in those families where the wives did not work. The more closely spaced were these large families, the more time the husband spent on his hobbies.

Among the small families, when the wives did not work, the husbands were more involved in business and professional organizations than when the wives did work. The small family fathers whose children were spaced between 28 and 36 months apart were more active in school organizations than were those fathers with more closely spaced or more distantly spaced children.

For the large families where the wives did not work, the husbands more actively participated in sports, in business and professional associations and in helping friends and relatives. Those large family husbands with closely spaced children were more active in business and professional organizations. Large family fathers with no young children attended concerts more frequently.

While many of the leisure time activities were not significantly related to family size and spacing, there were several family size effects, and there were also effects from the spacing of children, the age of the youngest child, and of the mother's work status on leisure time activities.

In general it seems that when the wife is working outside the home this affects the leisure time activities of the husband generally in the direction of keeping him closer to home. He is less likely to be active in professional or business associations and less likely to be involved in active participation in sports. Exactly the contrary effect seems to occur for the women. The working women are far more likely to be active in business or professional activities and also are more likely to be active in sports than are women who do not work. As might have been expected, the major effect of women working was to make the roles and activities of the two spouses more similar and less sex-specific.

Spacing seemed in general to affect some of the at-home activities such as reading and working on hobbies for the fathers. Men with more compact families were able to spend more time reading and working on hobbies than were the fathers with a greater spread in the ages of their children. What may be going on here is that with children of very different ages, the father may find that at least one child wants his attention while with children of similar ages they may be more likely to play with each other.

There also seemed to be patterns of leisure time which were specific to the ages of the children. Parents with children in the seven to ten age range seemed to spend more time attending sports events while parents with children under ten seemed to spend more time swimming, boating and picnicking. On the other hand parents with older children were more likely to be able to attend adult oriented cultural events such as concerts more frequently.

E. Effects of Family Size on the Children

Small family children tended to get better grades, with almost twice as many small family children in the very highest grade point average levels as compared to the large family children. Similarly the small family children were much more committed to school and would feel worse than would the large family children if they had to stop going to school. Small family children felt themselves to be brighter than average in a much higher proportion than did large family children. Most of these achievement and attitude toward school effects were considerably stronger for the boys than for the girls.

Boys from small families were aiming at higher occupations, on the average than were boys from large families. This result was even more striking when it was remembered that the fathers of large families, especially among the non-Catholics, tended to have higher occupational status than did the fathers of small families in this Boston suburban sample. There was, however, little family size effect on the occupational aspirations of the girls.

There was little influence of family size on the age at which a child expected to marry but there was, as expected, a strong association between family size and the number of children hoped for in a family of procreation. On the whole, the large family children expected to have about half a child more than did the small family children. The ideal family size for small family children was about two and a half children, while the average large family child expected to have about three children. Furthermore about twice as many (9.6 percent as compared to 5.8 percent) of the large family children expected to have as many children as God might send them than did the small family children.

Children from small families generally expected to space their own children out somewhat more than did the children from large families. This spacing between marriage and the birth of the first child, while significant, was less than two months for children from the large and small families. Small family children expected to have their first baby about 20 months after marriage while the large family children were looking for their first child some 18 months after marriage.

The differences were more significant and were larger when the spacings between the first and second child were examined. The small family children, on the average, were expecting their second baby some 25 months after the birth of the first, while the large family children expected that their second baby would come along only 20 months after the first. These results were mostly due to the family size effect on girls rather than on the boys. Among the girls the family size effect for the second child was seven months while for the boys it was only two months.

When the composition of the desired families was examined it was found that most children of both sexes prefered to have families with an equal number of children of both sexes. However, when a preponderance of one sex was desired, boys were preferred to girls for children of both sexes. There was a family size effect in that boys from large families tended to prefer a preponderance of boys in their own families of procreation, while girls from large families tended to prefer a preponderance of girls. In general, girls were about five times as likely as boys to prefer families with a preponderance of girls.

In terms of social participation, large family children, especially boys, were more involved with athletic teams and less involved with clubs than were small family children. While for many particular types of formal and informal associations there was no significant family size effect, there was a significant tendency for large family children to find a greater number of best friends at school than did small family children.

The small family children were more definite in their plans for college, and about ten percent more of the small family children than the large family children expected to go to college immediately after high school. This finding was in keeping with the higher occupational aspirations and the higher self-concept and greater orientation toward school of the small family children. In general, these effects were stronger for boys than for girls. Girls from large families did average about an hour more per week in home chores than did small family girls.

In the Puerto Rican sample it was possible to examine each family size separately from the one-child family to families with ten or more children. A general pattern emerged, where there were significant family size effects. In this pattern it was the two-child families whose children did better in terms of academic achievement, occupational aspirations, and belonging to more clubs and organizations than did children from other sized families. Generally there was a falling off from the high standards set by the two-child family children for children from families with three, four, and five children. Usually this decline continued until the seven child family was reached. After the seventh child, the family size did not seem to affect the dependent variable any further.

In all of these analyses, the one-child family children were comparable to children from families with six or more children. In fact, for the dependent variable of number of organizational memberships, the one-child family children belonged to fewer organizations, on the average, than did children from any other sized family.

In the Puerto Rican data, there were a great many variables for which there were no significant family size effects. These include age at marriage, number of children desired, plans for post-high school education, hours spent studying and doing home chores, desire to stay in school, and the number of best friends in school.

Regarding personality as affected by family size, in the Suburban Boston sample only one of the High School Personality Questionnaire factors, Enthusiasm (Factor F) was found to be related to family size and this was significant only among non-Catholic girls. In this group the large family girls tended to be more sober and serious, while the small family girls tended to be more enthusiastic.

With the much larger sample, there were more significant results with the Puerto Rican data. There it was found that the small family children tended to be more group dependent, while the large family children tended to be more self-sufficient. Small family children of both sexes tended to be more tense, while the large family children tended to be more relaxed. These two factors (HSPQ-Q2, Self-Sufficiency and HSPQ-Q4, Tension) were the only two significant family size effects for both sexes. However several other personality traits had a significant family size effect for girls.

In general, the girls from the small families tended to be more extroverted, more intelligent, more happy-go-lucky, more vigorous, and more dependent than were girls from the larger families. These findings, except for intelligence, were actually in the direction opposite to those originally postulated.

Girls from larger families in Puerto Rico tended to present themselves in a more socially desirable way than did the girls from smaller families. However in the Boston sample, the opposite effect was significant among Catholic girls. In that group, it was the small family girls who were more concerned with their social acceptability than were the large family girls. One interpretation of these opposite effects is that in general the higher socio-economic status norms in Puerto Rico are to have few children and so a girl from a large family is likely to feel that her social acceptability is in question. While in the suburban Boston towns, most of the Catholic families had more than two children. Hence a Catholic girl from such a small family would be more likely to see herself as socially questionned than would be a Catholic girls from a large family.

There were no significant family size effects on the other personality measures in the Boston data, but in Puerto Rico it was found that the larger the family, the more authoritarian were the children. This relationship held for both sexes but was stronger for the girls.

In Puerto Rico, the large family children tended to be more test anxious than were children from small families. However, among high school students, the only-child boys were considerably more test anxious than were boys from any other size family.

Using the Test of Effective Academic Motivation (TEAM) significant family size effects were found for the entire Boston sample for six of the eight TEAM factors. In all cases, the small family children had attitudes and motivations which were more in the direction of higher academic motivation than were the large family children.

It was found that the small family children tended to feel more valued and accepted, were more obedient and law-abiding, tended to work harder and more effectively, felt more capable, were more confident academically, and were more ambitious than were the large family children. In addition, for boys but not for girls, the small family boys tended to like school more than did the large family boys.

There were found to be several differences in the family size effect depending on the sex or religious background of the child. For example, Catholic children of either sex from small families tended to feel more capable than did Catholic children from large families. There was little family size effect on Feels Capable for non-Catholic children. Similarly, girls from small families were considerably more obedient than were girls from large families, but there was little family size effect on Obedient for the boys. On the other hand, boys but not so much for the girls, from small families were considerably more likely to feel confident academically than were large family boys.

On the whole, the most powerful family size effects were for the factors of Feels Capable, Confident Academically, and Ambitious. These three traits were much more likely to characterize the small family child than the large family child.

F. Effects of Spacing on the Children

The spacing issue could only be examined in the Boston Suburban sample since the relevant questions which would have allowed the construction of spacing indices were not asked in the 1968 data collection in Puerto Rico. On the whole, the spacing effects were found to be less powerful in most areas than were the family size effects.

Spacing between children was measured in two ways, spacing to the next youngest sibling and spacing to the next oldest sibling. These two indices were analyzed only for the children for whom the respective index was meaningful. For example, children who were first-born would not have a spacing to the next oldest sibling defined and were omitted from analyses using that index. Similarly, last born children did not have the index of spacing to the next youngest sibling defined and were omitted from the analyses using that index.

With respect to social participation, it was found that there was a significant spacing to the next oldest effect on the number of athletic memberships. In general, the closer the spacing to the next oldest sibling, the more the child participated in athletic teams. When this relationship was further specified by family size it was found that the spacing to the next oldest effect on athletic team memberships was quite strong for the small family children but considerably less powerful for the large family children.

Why do children who are closely spaced to the next oldest have a greater activity in athletic teams than more distantly spaced children? Why is this effect stronger in small families? One possible explanation is that children who are closely spaced to an older sibling have the opportunity to be taught by the more knowledgeable sibling how to play different games.

When the family has only two children, the relationship between the two closely spaced children is probably much more intimate than in a large family. Furthermore, in large families the number of possible teachers is greater, making the relationship to the next oldest only one of many possible relationships and hence the effect of spacing may be attenuated.

The next social participation measure, intensity of involvement in social clubs, was found to be affected by spacing to the next youngest. This effect was only near to significant (probability less than .08), but the gamma coefficient was .20 indicating a reasonable size for the effect. In general, the more distant from the next youngest sibling a child was spaced, the more they were involved in social clubs. When this effect was further specified by religion and sex, it was found to be strongest for the Catholic boys and less strong for the other three groups.

A curvilinear spacing effect was found for the social participation measure of number of best friends in school. The children with middle distances to the next youngest sibling (18 to 30 months) were less likely to have a large number of friends in school than were children who were closely spaced or distantly spaced to their next youngest sibling. This effect was significant, however, only for the Catholic girls group.

As was the case with the family size effect, it is interesting that the spacing effects for athletic memberships were quite different than for the other social participation indices. In general, close spacing to an older child led to greater athletic involvement while distant spacing to a younger child led to greater involvement in clubs and other outside-the-family social activities.

This research found that child spacing is related to the intelligence of the child. These effects of spacing on intelligence were significant for the sample of all children, regardless of family size. However when the analyses were conducted separately for small family and for large family children they were significant only for the large family children. Children who had a younger sibling who was spaced more than 27 months younger tended to be more intelligent than were children with more closely spaced younger siblings. On the other hand, when a child had an older sibling, the child tended to be more intelligent if that next older child was at least 18 months older and preferably no more than 27 months older. Thus it was better for the older child if the next youngest child was rather distantly spaced (more than 27 months) while it was better for the younger child if the next oldest sibling was moderately spaced (18 to 27 months). For the younger child, being spaced less than 18 months from an older sibling was clearly detrimental to intelligence. Such close spacing did not help the older child either. Thus, in this study, as far as the development of intelligence goes, close spacing (less than 18 months) was detrimental to both the older and the younger child.

The disadvantage of close spacing on the intellectual development of both the older and the younger sibling is probably due to the lessened adult attention received by each child when both have to share the same parents over the same periods of time coupled with the lesser cognitive stimulation each child can give the other. However, when the older child is somewhat older (18 to 27 months) than the younger, this older sib can provide a significant increment to the intellectual stimulation of the younger child. However this process does not particularly help the intellectual growth of the older child. On the other hand when the two children are quite distantly spaced, more than 27 months, the older child is able to interact with the parents considerably more especially in the second year of life when linguistic abilities start to grow rapidly. The attention is not diverted by the presence of a younger sibling who has not yet been born.

This investigation examined college plans, orientation toward getting a job now, and the level of occupation aspired to by spacing. It was found that college plans were related to the spacing to the next youngest child but not to spacing to the next oldest child. In general, children with quite distant spacing to the next youngest child were more definite in their plans to attend college right after high school than were children with very close or moderate spacings. The effect was significant for the total sample and for the two-child family children when analyzed separately but was not significant for the large family children.

The two job related measures, the importance of getting a job now and the status level of the occupation eventually aspired to, were related to the spacing to the next oldest sibling, but not to the spacing to the next youngest measure. The more closely spaced the younger children, who were more oriented toward getting a job now, also had the highest occupational aspirations. In this sample then, children who were closely spaced behind an older child were more oriented toward working and were also aiming for higher prestige occupations. The spacing effect was significant for the importance of getting a job now for the entire sample and for the large family children but not for children from small families. On the other hand, the spacing effect on occupational aspirations was not only significant for the total sample, but also for both the large and the small family children.

The relationships of the Effective Academic Motivation (TEAM) factors to spacing was investigated. There were no significant effects of the spacing to next youngest measure with the TEAM factors taken as a whole. However, the Feels Capable factor was significant in the univariate analyses. The middle spaced children Felt less Capable than did children either closely spaced or distantly spaced to the next youngest child. Remember that in this middle spacing situation, the younger child tended to be especially intelligent and this may have affected the degree to which the older child would feel capable.

For the Spacing to the Next Oldest measure, there were clear effects on the TEAM factors. The effect was significant for the entire sample and for the large family children but did not reach statistical significance for the small family children. One of the TEAM factors had a highly significant univariate significance and two others were almost significant (p = .06) or were significant when the step-down F procedure was used.

The main findings were that when a child was closely spaced behind the next oldest child there was a tendency for the child to be more Obedient. Children who had medium spacing tended to Feel more Capable. Remember that the older child in these medium spacing pairs tended to feel less capable. Finally, children who were distantly spaced behind the next oldest child felt much less Self-Sufficient.

The relationships between spacing and personality produced some interesting findings. Among large family children who were closely spaced, the older child of the pair tended to be more authoritarian while the younger child of the pair tended to be less intelligent, more sober, more emotionally stable, and more careless of protocol. Among the small family children there were no significant spacing effects on these personality measures.

The Schaefer Children's Report of Parental Behavior Inventory (CRPBI) was used to measure parent-child relationships. Three factors for mothers and three for fathers were derived from this instrument. These factors were called: Hostile Psychological Control, Acceptance, and Laxity of Discipline.

The effects of two measures of spacing on the two family sizes were examined. Among the large family children, a child who was closely spaced to his next oldest sibling was likely to perceive both parents as rather strict disciplinarians while a child with intermediate spacing was likely to feel that the mother used less Hostile Psychological Control on him or her.

For the spacing to next youngest measure, there was an indication that children who had more than 30 months separating them from the next youngest child felt themselves to be less accepted by their father than were children who were closely spaced.

Among small family children, the youngest child was significantly less accepted by either parent when closely spaced with an older child than when the two children were spaced more than 30 months apart. There was also an indication that fathers were more strict with a younger child if he or she was spaced between 18 and 30 months from the oldest child, while children spaced less than 18 months to the next oldest sibling were disciplined much more laxly. There were no significant effects of spacing to the next youngest sibling for the small family children in the parent-child relationships realm.

When sibling order was examined for its effects on parent-child relationships it was found that father's acceptance was higher for first born boys than for last born boys in large families. Both parents in large families tended to be more strict in their discipline of first born girls than they were of last born girls. First born girls in these large families also seemed to be subject to greater use of hostile psychological control methods used by their fathers.

Among the small families, first born boys were more accepted by their mothers than were last born boys. Both parents were more strict disciplinarians for the first born than for the last born boys. Fathers were also likely to be more strict disciplinarians for the first born girls than for the last born girls.

Summary of the Effects of Child Spacing

Two measures of child spacing were used: Spacing to Next Oldest and Spacing to Next Youngest. These measures could not be defined on some children, for example first born children did not have a defined Spacing to the Next Oldest, and last born children did not have a defined Spacing to the Next Youngest. Children for whom a particular measure was not defined were omitted from analyses conducted with that measure. Since some children had only one measure defined, separate analyses were done with these two child-spacing measures.

The data on child-spacing was available only for the Suburban Boston sample, and all analyses reported deal with this sample.

When two children are closely spaced (less than 18 months apart), the younger child displayed an interesting set of characteristics. These children were far more athletic, but less involved in social clubs than were children of other spacings. These younger children in a closely spaced pair tended to be less intelligent, more interested in working now than in continuing in school and yet were somewhat more oriented toward college than were younger children in middle-spaced pairs. These younger children in closely spaced pairs were considerably more likely to be thinking of a high status occupation than were more distantly spaced younger children.

In terms of personality and motivation, these children who were closely spaced behind an older child tended to be more obedient, more self-sufficient, to feel somewhat less capable, to be more sober and serious, yet to be less controlled and less affected by feelings than were more distantly spaced children. The parents of these younger children in a closely spaced pair tended to use more hostile psychological control and to subject them to more strict discipline than more distantly spaced children, especially when there were five or more children in the whole family. Among the two-child families, the closely spaced second-born felt that the mother did not accept him or her as much as she did more distantly spaced second borns.

Turning next to the older child of this closely spaced pair, this child tended to be more authoritarian, less active in social clubs, yet tended to have more best friends in school than older children more distantly spaced to a next younger child (this was significant only for Catholic girls). This closely spaced older child tended to be less intelligent (only among large family children), and among these large family closely spaced older children there was a tendency for them to be more accepted by their fathers than were older children with more distant spacing to their next youngest sibling.

The younger child in a pair of children spaced a medium distance apart (18 to 30 months) tended to be more intelligent than younger children spaced either closely or distantly to their next oldest sibling. These middle spaced younger children were more school oriented and less interested in getting a job now than were younger children of other spacings. In keeping with their higher intelligence, these children felt more capable than other children. The mothers of these middle spaced younger children had mothers who tended to use relatively little hostile psychological control on them (This was significant only among large family children). These middle spaced younger children, as contrasted to the closely spaced younger children in these large families tended to be more laxly disciplined by both parents. Among the small family children, these middle spaced second-borns tended not to be well accepted by their fathers.

When the older child was considered among these middle spaced pairs, there was a tendency (only significant for Catholic boys) for these children to be either very active or not a member at all of social clubs. Among non-Catholic girls, these middle spaced older children tended to have fewer best friends in school than did children of other spacings. These children with middle spacing to the next youngest child were more likely to have low intelligence than were children of either more distant or closer spacing to the next youngest child. Among the large family children these middle spaced older children were also more likely than other spaced children to be of high intelligence while among the small family children the middle spaced children were clearly averaging lower intelligence than children who were either closely spaced or distantly spaced to the next youngest child. Going along with this lower average intelligence, these middle spaced children were less oriented toward college than either the close or the distantly spaced children. These medium spaced children tended to feel less capable, tended to be less obedient and law abiding, and tended to be less likely to work hard than children of either more close or more distant spacings.

The third pattern to be considered were when a pair of children were spaced more than 30 months apart. The younger child in such a distantly spaced pair tended to be rather unathletic, yet to be quite involved in social clubs. These distantly spaced younger children were more likely to be highly intelligent than were the closely spaced children but not as likely to be highly intelligent as the middle spaced younger child.

These distantly spaced younger children were highly oriented toward college right after high school, had many best friends in school, and were not too interested in getting a job right now. On the other hand they did not tend to have especially high occupational aspirations.

These distantly spaced to the next oldest sibling children tended to not be very obedient and law abiding, did not feel as capable as did middle spaced children, were not very self-sufficient, tended to be happy-go-lucky rather than sober and serious, yet also were more controlled, more sensitive, and more affected by feelings than were children with lesser spacings.

These children with more than 30 months separating them from their next oldest sibling tended to perceive their parents as using more hostile psychological control than did middle spaced children. Among the large family children, both parents tended to be quite lax in their disciplining of these distantly spaced younger children. Among the small family children, these distantly spaced second-born children tended to be very accepted by both their mother and father. They were the "baby" of the family.

Turning next to the oldest child in these pairs of distantly spaced children (among non-Catholic girls) these distantly spaced older children tended to have more best friends in school than did middle spaced girls. Children distantly spaced to the next youngest child tended to be more intelligent and more oriented toward college as well as feeling more capable than did children more closely spaced to their younger sibling. Among the large family children, the more distantly spaced older children tended to be more obedient and to work harder than did middle spaced children. In terms of personality, and among the large families, these distantly spaced older children tended to be less excitable, less controlled, and less tense than were children more closely spaced to a younger sibling. These more distantly spaced children tended to be less authoritarian than were the more closely spaced children. There was also an indication that these distantly spaced children felt less accepted by their fathers than were those children with closely spaced younger children.

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APPENDIX A

INSTITUTE OF HUMAN SCIENCES
BOSTON COLLEGE
CHESTNUT HILL, MASSACHUSETTS 02167
AREA CODE (617) 969-0100

22 August 1972

Dear

We, at the Institute of Human Sciences, Boston College, are conducting a study of families in suburban communities. You may have received some correspondence from us earlier, but since so many people are away or involved with summer plans, we are writing again to see if you might be interested in assisting us this Fall.

Our research program is supported by the National Institute of Child Health and Human Development, and we hope to further our understanding of such aspects of family life as how decisions are made, how tasks are divided, what families do for recreation, and differences between large and small families. We have invited those families to participate who have two children or five or more, with at least one child in junior high or high school. The findings will be used in high school Social Studies and Home Economics courses.

For the families who choose to participate, the mother will be interviewed at home for about an hour to an hour and a half. This will be done at her convenience any time through December 1972. Also, a teenager in your family will be asked to come to a central location in your town some time during a weekend to fill out a few questionnaires. This will be a group session and other teenagers from your community will be present. We will pay a small fee for any inconvenience or transportation costs of the teenager.

As with all research conducted with federal funds, your privacy is assured. Information about identifiable individuals or families will not be released, but we will be more than happy to send you a report of the general results of the study.

We hope that you will be able to participate. Please fill out the enclosed post card and mail it at your earliest convenience. If you have any questions, don't hesitate to call us at 969-0100, ext. 2338 or 2339.

Thank you very much.

Sincerely,

Ronald L. Nuttall, Ph.D.

Ena V. Nuttall, Ed.D.

APPENDIX A

Dear Dr. Nuttall:

Both my teenage child ______________________
(name)

and I ______________________ are ☐ /are not ☐
(Mother's name)

willing to participate in the family life style study.

______________________ (Family Name: please print)

______________________ (Mother's signature)

______________________ (Street address)

______________________ (Student's signature)

______________________ (City)

______________________ (Telephone number)

Paul Revere Patriot
U.S. Postage 6¢

Dr. Ronald Nuttall
Institute of Human Sciences
McGuinn Hall
Boston College
Chestnut Hill, Mass. 02167

MINUTE MAN
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New
England
Newsclip

Boston College team to study local families

Drs. Ronald L. and Ena V. Nuttall of the Boston College Institute of Human Sciences will involve approximately 125 families from Bedford in a study funded through the National Institute of Child Health and Human Development. Designed to explore family life styles, the study will gather information from a total of 500 interviews of families in Lincoln, Bedford, Wellesley and other communities.

"The reason for our study," Dr. Ronald Nuttall explained, "is to better understand how families make decisions, how family tasks are divided, what families do for recreation, how families differ in community activities, and what the differences are between large and small families."

"Eventually," continued Dr. Ena Nuttall, "we hope this information will become part of high school courses in home economics and social studies, and become useful to teenagers who will shortly be forming their own family units."

The Nuttalls chose to interview Bedford families because the registrar and school census information was completed and available faster than that of other communities. the families were chosen because each has a junior or senior high school teenage member and a certain family size. They also emphasized that privacy is assured for any family consenting to assist in the study.

Of families participating in the study, the mother will be interviewed in her home, and the teenage family member will be asked to assemble with other teenagers in a central Bedford location to fill out a few questionnaires. The Institute will pay a small fee for transportation costs to each teenager.

any participant assisting in the study will receive a report of the general results upon request.

Drs. Ena and Ronald Nuttall with son Key, discuss plans to implement a study of family life styles which will be funded through the national Institute of Child Health and Human Development. Approximately 125 families in Bedford will be asked to participate in the study.

TO BE USED WITH APPENDIXES B,C,&D

GLOSSARY FOR MOTHERS' AND FATHERS' INSTRUMENTS AND THE CHILDREN'S BACKGROUND QUESTIONNAIRE

B= Blood, R.O., Jr.
The division of labor in city and farm families. *Marriage and Family Living*, 1958, 20, 170-174.

B&W= Blood, R.O., Jr., and Wolfe, D.M.
Husbands and Wives: The Dynamics of Married Living. Glencoe, Illinois: Free Press, 1960.

CA= Cantrill, Hill
The Pattern of Human Concerns. New Brunswick, N.J.: Rutgers University Press, 1965.

C&R= Converse, P., and Robinson, J.
mentioned in *Measures of Social Psychological Attitudes*, Survey Research Center, Institute for Social Research, 1969.

C= Coleman, J.S.;Campbell,E.Q.; Hobson, C.J.;McPartland,J; Mood,A.M.; Weinfeld,F.D. & York,R.L.
Equality of Educational Opportunity. Washington,D.C.:U.S.Government Printing Office,1966.

E= Easterlin, Richard A.
Relative Economic Status and the American Fertility Swing. *Family Economic Behavior: Problems and Prospects*,edited by Eleanor Bunet Sheldon. Philadelphia: J.B. Lippincott Co., 1973.

F&DJ=Faulkner, J.E., and DeJong, G.F.
Religiosity in 5-D: an empirical analysis. Paper presented at American Sociological Association, September, 1965, Chicago, Ill.

F= Flanagan, J.C., Davis, F.B., Dailey, J.T., Goldberg, I, Neyman, C.A., Shaycoft, M.F., and Orr, D.B.
Project Talent: The American High School Student. Pittsburg, Pa.: University of Pittsburg, Project Talent Office, 1964.

F&T= Freedman, R., and Takeshita, J.Y.
Family Planning in Taiwan: An Experiment In Social Change. Princeton, N.J.: Princeton University Press, 1969.

FR= Fried, M.
Interview schedule from *A Study of Rural and City Life*, 1968. (unpublished) This document can be obtained from Dr. Marc Fried, Laboratory of Psycho-Social Studies, Boston College, Chestnut Hill, MA 02167.

GVF= Gurin, G., Veroff, J., and Feld, S.
Americans View Their Mental Health. New York: Basic Books, 1960.

L&H= Laumann, E.O., and House, J.S.
Living Room Styles and Social Attributes: The Patterning of Material Artifacts in a Modern Urban Community. Sociology and Social Research, Volumne 54, No. 3, April, 1970.

N&N= Nuttall, Ronald L., and Nuttall, E.V.
New items generated for this study.

R= Rainwater, Lee
Family Design: Marital Sexuality, Family Size, and Contraception. Chicago: Aldine Publishing Co., 1965.

S&S= Smith, David H., and Smith, Gene M.
Interview Schedule used in Predicting Grade Point Averages; Study of Factors Affecting Student Achievement. Report No. 1. Unpublished Manuscript, Boston College, Chestnut Hill, MA, 1968.

STR= Strumpel, B.
Economic Life-Styles, Values, and Subjective Welfare: An Empirical Approach. Unpublished Monograph. Institute of Life Insurance, 1971. He borrowed and modified the scale from: Gurin, P., Gurin, G., Lao, R.C., and Beattie, M. Internal-external control in the motivational dynamic of Negro youth. Journal of Social Issues, 1969.

S= Stycos, J.M.
Family and Fertility in Puerto Rico. New York: Columbia University Press, 1955.

APPENDIX B

Family Research Project
Institute of Human Sciences
Boston College, Mass. 02167

Mother's Interview Schedule

Introduction

This interview is part of a two-year research project on the correlates of family size and child spacing. The project intends to study how family size and child spacing affect the lives of parents and their offspring. Your cooperation in answering this interview is greatly appreciated. Information given by you on this interview is entirely voluntary and will be handled by research personnel only. Your privacy will be respected.

Respondent's Name: ____________________

Address: ____________________

Phone Number: ____________________

Appointment Time: ____________ Date: ____________

Interviewer: ____________________

Informant Number: ____________________

Duration of Interview: ____________ Hours ____________ Minutes

Date: ____________________

☐ Would like results

☐ Would not like results

Mother's Interview Schedule

Section I: Identification Data

1. What is your name? (N & N)

____

First Name Middle Name Last Name

2. On what date were you born? (N & N)

____

Day Month Year

3. How old is your husband? (N & N)

________________years.

Section II: Childbearing History

4. What is the total number of living children in your family? Include all full sons, daughters, half sons and daughters, step sons and daughters, and adopted sons and daughters. Include those not living at home with you. (Adapted from F)

First Name	Middle Name	Last Name	Date of Birth	Sex	Age	At Home Yes/No	School Gr. College or Work Status

Section III: Residential History and Experience

5. Where did you live before moving to this community? (N & N)

____

6. How long have you lived in this community? (N & N)

____ years

7. Which one of the following best describes the community in which you lived just before moving to this community? (SHOW CARD #1) (N &N)

☐ CITY
☐ SMALL TOWN
☐ SUBURB
☐ FARM COUNTRY

8. How many different houses or apartments (not counting vacations away from your regular home) has your family lived in since you were married? (N & N)

____
(Number)

9. Where have you spent most of your life? (N & N)

____
TOWN OR CITY STATE COUNTRY

10. In what type of community have you spent most of your life? (Give your best estimate, if you are not sure.) (N & N)
(SHOW CARD #1)

☐ CITY
☐ SMALL TOWN
☐ SUBURB
☐ FARM COUNTRY

SECTION IV: Community of Origin

11. Where were you born? (N & N)

TOWN OR CITY STATE COUNTRY

12. Where was your husband born? (N & N)

TOWN OR CITY STATE COUNTRY

13. Where were your parents born? (N & N)

FATHER MOTHER

14. Where were your husband's parents born? (N&N)

FATHER MOTHER

15. In what type of community did you live when you were being raised? (Obtain best possible estimate if you are not sure.) (N&N)
(SHOW CARD #1)

☐ CITY

☐ SMALL TOWN

☐ SUBURB

☐ FARM COUNTRY

16. In what type of community did your husband live when he was being raised? (N&N)
(SHOW CARD #1 AGAIN)

☐ CITY

☐ SMALL TOWN

☐ SUBURB

☐ FARM COUNTRY

SECTION V: Marital-History

17. How long have you been married? (N&N) ______ (YEARS)

18. How many times have you been married? (N&N) ______ (TIMES)

19. How old were you when you got married? (N&N) ______ (YEARS)

20. At what age do you think a girl ought to be married? (S)

______ (YEARS)

21. Why should a girl marry at that particular age? Why not before? Why not later? (S)

______

______

______

22. At what age do you think a boy ought to be married? (S)

______ (YEARS)

23. Why should a boy marry at that particular age? Why not before? Why not later? (S)

______

______

______

24. How many times has your husband been married? (N&N) ______ (TIMES)

25. How old was your husband when he got married? (N&N) ______ (YEARS)

SECTION VI: Leisure Time Activities

We're interested in things people do in their spare time, when they aren't working. (C&R)

26. I have a list of free-time activities, and I would like to have you tell me about how often you have been doing these things during the past year. (HAND CARD 2) For example, "Going to the movies." Would you say that you've generally been going to the movies, every day, twice a week, once a week, every two to three weeks, six to twelve times a year, once to five times a year, or not at all this year.

(INTERVIEWER: INSERT NUMBER IN THE APPROPRIATE BOX:

1: Every Day
2: Twice a Week
3: Once a week
4: Every 2 to 3 Weeks
5: 6 to 12 times per year
6: 1 to 5 times per year
7: Not at all this year

a. Going to the movies. (C&R)...... ______
b. How many hours per week do you spend reading?. (N&N)........... ______
c. Going to classes or lectures. (C&R) ______
d. Going to watch sports events (C&R)..... ______
e. Fishing, hunting, camping. (C&R) hiking. ______
f. Boating, swimming, picnics pleasure drives. (C&R)........ ______
g. Playing active sports: bowling, softball, etc. (C&R).... ______
h. Going to nightclubs, bars. (C&R) ______
i. Going to fairs, museums, exhibits, etc. (C&R)........... ______
j. Gardening and working around the yard. (C&R)............... ______
k. Going to concerts, plays. (C&R). ______
l. Making and fixing things around the house. (C&R)....... ______
m. Shopping, except for groceries. (C&R) ______
n. Helping relatives, neighbors friends. (C&R)............... ______
o. Playing cards, other indoor games. (C&R)................. ______
p. Working on hobbies, painting or music. (C&R)............. ______
q. Visiting with friends of the same sex. (N&N)............... ______
r. Volunteering in community or social projects. (N&N)..... ______
s. Going out to dinner. (N&N)..... ______
t. How many hours of T.V. do you watch. (N&N)............. ______

We're interested in things people do in their spare time, when they aren't working. (C&R)

27. I have a list of free-time activities and I would like to have you tell me about how often your husband has been doing these things during the past year. (HAND CARD 2) For example, "Going out to the movies", once a week, twice a week, every day, every two to three weeks, six to twelve times per year, one to five times per year, not at all this year.

(INTERVIEWER: INSERT NUMBER IN THE APPROPRIATE BOX)

1: Every day
2: Twice a week
3: Once a week
4: Every 2 to 3 weeks
5: 6 to 12 times per year.
6: 1 to 5 times per year
7: Not at all this year

a. Going to the movies. (C&R).. ______
b. How many hours per week do you spend reading?. (N&N)....... ______
c. Going to classes or lectures. (C&R)........... ______
d. Going to watch sports events. (C&R).............. ______
e Fishing, hunting, camping skiing. (C&R).............. ______
f. Boating, swimming, picnics pleasure drives. (C&R)..... ______
g. Playing active sports, bowling, softball etc. (C&R) ______
h. Going to nightclubs, bars. (C&R)................ ______
i. Going to fairs, museums exhibits, etc. (C&R)....... ______
j. Gardening and working around the yard (C&R)...... ______
k. Going to concerts, plays etc.. (C&R)............... ______
l. Making and fixing things around the house. (C&R)..... ______
m. Shopping except for groceries.. (C&R)............... ______
n. Helping relatives, neighbors, friends. (C&R)............... ______
o. Playing cards, other indoor games (C&R)................ ______
p. Working on hobbies, painting music.. (C&R)............... ______
q. Visiting with friends of the same sex.. (N&N)............ ______
r. Volunteering in community or social projects. (N&N).... ______
s. Going out to dinner. (N&N)... ______
t. How many hours of T.V. does your husband watch. (N&N).... ______

SECTION VIII: Social Participation

How active have you been in any or more of the following organizations? (FOR ITEMS 28-36 HAND CARD #3)

28. School organizations, such as the school board, Parent-Teacher's Association, etc. (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

29. Political groups or organizations (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

30. Labor union or trade union activities (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

31. Business or professional associations (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

32. Hobby groups, such as dramatics, band, arts, crafts, etc. (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

33. Sports clubs, teams or organizations.(F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

34. Social groups (Eastern Star, Sororities,etc.) (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

35. Civic organizations (Rotary, Lions, Kiwanis, League of Women Voters, etc.). (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

36. Auxiliary of verterans' organization (American Legion, Veterans of Foreign Wars, etc.). (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

(ITEMS 37 - 46: USE CARD #3 AGAIN)

How active has your husband been in any one or more of the following organizations? (F)

37. Church or religious groups, teaching Sunday school, or charity work.

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

38. School organizations, such as the school board, Parent-Teachers' Association, etc. . (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

39. Political groups or organizations (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

40. Labor union or trade union activities (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

41. Business or professional associations (F)

☐ 1. Extremely active
☐ 2. Very active
☐ 3. Fairly active
☐ 4. A member, but not very active
☐ 5. A member, but rarely active
☐ 6. Not a member of any of these organizations

42. Hobby groups, such as dramatics, band, arts, crafts, etc. (F)

☐ 1. Extremely active

☐ 2. Very active

☐ 3. Fairly active

☐ 4. A member, but not very active

☐ 5. A member, but rarely active

☐ 6. Not a member of any of these organizations

43. Sports clubs, teams, or organizations (F)

☐ 1. Extremely active

☐ 2. Very active

☐ 3. Fairly active

☐ 4. A member, but not very active

☐ 5. A member, but rarely active

☐ 6. Not a member of any of these organizations

44. Social groups (Elks, Moose, fraternities, etc.) (F)

☐ 1. Extremely active

☐ 2. Very active

☐ 3. Fairly active

☐ 4. A member, but not very active

☐ 5. A member, but rarely active

☐ 6. Not a member of any of these organizations

45. Civic organizations (Junior Chamber of Commerce,etc.) (F)

☐ 1. Extremely active

☐ 2. Very active

☐ 3. Fairly active

☐ 4. A member, but not very active

☐ 5. A member, but rarely active

☐ 6. Not a member of any of these organizations

46. Active military reserve unit or veteran's organization (American Legion, Veterans of Foreign Wars, etc.). (F)

☐ 1. Extremely active

☐ 2. Very active

☐ 3. Fairly active

☐ 4. A member, but not very active

☐ 5. A member, but rarely active

☐ 6. Not a member of any of these organizations

47. Do you take a vacation every year or almost every year? (N&N)

YES ☐ NO ☐
(SKIP TO #51)

48. What do you usually do during your vacations? (N&N)

49. Who usually accompanies you on your vacations? (N&N)

50. How long do you go for a vacation? (N&N)

Now I'd like to ask you some questions about the people you know best. For instance:

51. Think of the three couples you are closest to. Now think about one of the couples. (FR)

	COUPLE #1
52. Is (COUPLE) related to you by blood or marriage? (FR)	☐ BLOOD ☐ MARRIAGE ☐ FRIEND
53. Where do they live? (SHOW CARD #4) (FR)	☐ SAME BUILDING ☐ SAME BLOCK ☐ SAME NEIGHBORHOOD OR COMMUNITY ☐ ELSEWHERE IN THIS TOWN ☐ ELSEWHERE IN MASSACHUSETTS ☐ OTHER: ____________
54. How long have you known them? (FR)	____________
55. How often do you see them? (FR)	____________
56. Do they have any children? (N&N)	☐ YES ☐ NO
57. If yes, how many children do they have? (N&N)	____________ (NUMBER)

COUPLE #2	COUPLE #3
☐ BLOOD ☐ MARRAIGE ☐ FRIEND	☐ BLOOD ☐ MARRAIGE ☐ FRIEND
☐ SAME BUILDING ☐ SAME BLOCK ☐ SAME NEIGHBORHOOD OR COMMUNITY ☐ ELSEWHERE IN THIS TOWN ☐ ELSEWHERE IN MASSACHUSETTS ☐ OTHER: ____________________ ______________________________	☐ SAME BUILDING ☐ SAME BLOCK ☐ SAME NEIGHBORHOOD OR COMMUNITY ☐ ELSEWHERE IN THIS TOWN ☐ ELSEWHERE IN MASSACHUSETTS ☐ OTHER: ____________________ ______________________________
______________________________ ______________________________	______________________________ ______________________________
☐ YES ☐ NO	☐ YES ☐ NO
______________________________ (NUMBER)	______________________________ (NUMBER)

58. How many jobs does your husband have? (N&N)

☐ NONE	☐ TWO
☐ ONE	☐ THREE OR MORE
	☐ DOES NOT WORK FOR PAY

59. Does your husband direct or supervise the work of other people? (Adapted from F)

(If he works on more than one job, ask for his most important job. If he is now out of work, or if he is retired, ask for his last job.)

☐ NO

☐ YES, A FEW PEOPLE: (UP TO 4 OR 5 PEOPLE)

☐ YES, MANY PEOPLE (FROM 6 TO 19 PEOPLE)

☐ YES, (20 TO 49 PEOPLE)

☐ YES, 50 PEOPLE OR MORE

60. What kind of work does your husband do? (N&N)

____

____

61. In what type of business does your husband work? (N&N)

____

62. Does your husband work for wages, salary, or is he self-employed? (N&N)

☐ WAGES

☐ SALARY

☐ SELF-EMPLOYED

63. Have you worked at a job outside your home when your children were growing up from ages 0 to five years? (S&S)

☐ YES, FULL TIME

☐ YES, PART TIME

☐ NO

64. Have you worked for pay at any time in the last year? (Adapted from F)

☐ YES, REGULAR PART-TIME WORK

☐ YES, OCCASIONAL PART-TIME WORK

☐ YES, REGULAR FULL-TIME WORK

☐ YES, OCCASIONAL FULL-TIME WORK

☐ NO

65. How long have you worked for pay in your life? (Adapted from F)

A) Before marriage ______________________
NUMBER OF YEARS

B) After marriage ______________________

66. What kind of work do you do? (N&N)

____

67. (IF RESPONDENT IS FULL-TIME HOUSEWIFE, SKIP TO 69.

In what type of business do you work? (N&N)

____

68. Do you work for wages, salary, or are you self-employed? (N&N)

☐ WAGES

☐ SALARY

☐ SELF-EMPLOYED

(IF WORKING AT PRESENT SKIP TO 73)

69. Are you planning to get a job, thinking about getting a job, or will you continue as a housewife? (FR)

☐ PLANNING TO GET A JOB

☐ THINKING ABOUT GETTING A JOB

☐ CONTINUE AS A HOUSEWIFE (SKIP TO 71)

70. Why is that? (FR)

____

____

71. Do you plan to work sometime later on? (FR)

☐ YES
☐ DEPENDS
} (ASK 72)

☐ NO
☐ DEPENDS
} (SKIP TO 73)

72. When do you think that will be? (FR)

____

____

73. How far did your husband go in school? (N&N)

____

(WRITE DOWN HIGHEST LEVEL OF EDUCATION ATTAINED. WRITE DOWN THE BEST ANSWER EVEN IF THE INTERVIEWEE IS NOT SURE.)

74. How far did you go in school? (N&N)

____

(WRITE DOWN THE HIGHEST LEVEL OF EDUCATION ATTAINED. WRITE DOWN THE BEST ANSWER EVEN IF THE INTERVIEWEE IS NOT SURE.)

75. If your sons were capable and willing, how far would you like your sons to go in school? (N&N)

(IF RESPONDENT DOES NOT WANT TO GENERALIZE, GET DATA FOR EACH SON)

☐ HIGH SCHOOL
☐ OBTAIN A HIGH SCHOOL DIPLOMA
☐ OBTAIN A BACHELOR'S DEGREE
☐ OBTAIN A MASTER'S DEGREE
☐ OBTAIN A DOCTORAL DEGREE

____

76. If your daughters were capable and willing, how far would you like them to go in school? (N&N)

(IF RESPONDENT DOES NOT WANT TO GENERALIZE, GET DATA FOR EACH DAUGHTER.)

☐ HIGH SCHOOL
☐ OBTAIN A HIGH SCHOOL DIPLOMA
☐ OBTAIN A BACHELOR'S DEGREE
☐ OBTAIN A MASTER'S DEGREE
☐ OBTAIN A DOCTORAL DEGREE

SECTION X: Number of Children

77. Before you and your husband were married, did you think about how many children you might have? (N&N)

☐ A LOT
☐ SOME
☐ ONLY A LITTLE
☐ NOT AT ALL

78. Before you were married, how many children in total did you think you would like to have? (N&N)

____
(NUMBER)

79. Before you were married, how many children in total did your husband think he would like to have then? (N&N)

____
(NUMBER)

80. After your first child, how much did you and your husband talk about how many children you might have? (N&N)

☐ A LOT
☐ SOME
☐ A LITTLE

81. After your first child, how many children in total did you think you would like to have then? (N&N)

____

82. After your first child, how many children in total did your husband think he would like to have? (N&N)

____
(NUMBER)

83. At present, how many children in total do you want? (R)

____
(NUMBER)

84. Why do you think that is a good number? Why not fewer? Why not more? (R)

____

____

____

85. At present, how many children in total does your husband want? (N&N)

____
(NUMBER)

86. At present, how much do you and your husband discuss the number of children you might have? (N&N)

☐ A LOT

☐ SOME

☐ A LITTLE

87. What do you think is the ideal number of children for the average American family? (R)

____
(NUMBER)

88. Why that number? (R)

____

____

89. (IF INTERVIEWEE HAS FEWER/MORE CHILDREN THAN SHE THINKS IDEAL)

Why do you have fewer/more children than what you think is ideal? (S)

____

____

90. In your opinion, fewer than how many children is too few for a couple to have? (F&T)

Fewer than ______________________ children.

Other Response:

____

91. In your opinion, more than how many children is too many for a couple to have? (F&T)

More than ______________________ children.

Other response:

____

92. Some people want families composed of more boys than girls; others want families with more girls than boys, and other want an equal number of boys and girls. What kind of a family would you like to have? (S)

☐ More Girls
☐ More Boys
☐ Equal Number
☐ No Preference

SECTION XI: Spacing of Children

93. We have talked quite a bit about the number of children people want. What about the time between them? How important do you think it is to plan the spacing between children? (Adapted from R)

(SHOW CARD #5)

☐ 1. Of no importance
☐ 2. Not too important
☐ 3. Of some importance
☐ 4. Very important
☐ 5. Very, very important

94. What length of time do you think is best between children? (R)

____
(YEARS)

95. How soon after marriage do you think a couple should have the first child? (S) ______________________

96. How soon after marriage did you have your first baby? (S)

____________________ (MONTHS) ____________________ (YEARS)

97. (IF INTERVIEWEE HAD CHILDREN SOONER THAN/ LATER THAN SHE SAID:)

Why did you have it (SOONER THAN)/ (LATER THAN) your ideal? (S)

____

____

____

98. Do you expect to have more children? (R)

☐ Yes ☐ No ☐ Don't know

99. (IF SUBJECT ANSWERS "YES" TO PREVIOUS QUESTION)

How many do you think you might have? (R)

____________________ (NUMBER)

100. Some couples cannot have more children because of an operation or physical reasons. How is it with you? Do you think you can have more children? (F&T)

☐ Cannot ☐ Can (SKIP TO 102) ☐ Not Sure (SKIP TO 102) ☐ Don't know (SKIP TO 102)

101. Why do you think you can't have more children? (F&T)

____

____

102. Some women, after becoming pregnant, have miscarriages, stillbirths, or induced abortions. Apart from the children you told me about before, have you ever had any experience like this? (F&T)

☐ Yes ☐ No (SKIP TO 105)

103. Which pregnancy was it? (F&T)

_______________th pregnancy.

104. When did it happen? That is, in what year and month? (F&T)

______________________ (YEAR) ______________________ (MONTH)

SECTION XII: Significant Others Involved in Family Decisions

105. Who besides you and your husband are interested and close enough to you to be concerned about how many children you have? (SHOW CARD #6) (Modified from R)

☐ 1. My parents
☐ 2. My husband's parents
☐ 3. My siblings
☐ 4. My husband's siblings
☐ 5. Other relatives
☐ 6. Neighbors
☐ 7. My friends
☐ 8. Mutual friends
☐ 9. My husband's friends
☐ 10. Fellow workers or colleagues
☐ 11. Obstretrician, pediatrician
☐ 12. Minister, rabbi, or priest
☐ 13. no one
☐ 14. Others. Who? ______

____

____

106. With whom have you discussed the question of the number of children a couple has, and how many is enough or too many? (SHOW CARD #6) (Modified from R)

☐ 1. My parents
☐ 2. My husband's parents
☐ 3. My siblings
☐ 4. My husband's siblings
☐ 5. Other relatives
☐ 6. Neighbors
☐ 7. My friends
☐ 8. Mutual friends
☐ 9. My husband's friends
☐ 10. Fellow workers or colleagues
☐ 11. Obstetrician or Pediatrician
☐ 12. Minister, rabbi, or priest
☐ 13. Others. Who? ______

____

107. What sorts of ideas do these others have and why do you suppose they feel that way? (R)

____

____

____

____

____

SECTION XIII: Family Relationships

108. How many people live in your home? Include yourself, sons daughters, parents, relatives, boarders, roomers, servants, or others who live with you. (F)

____
(NUMBER)

109. What was the number of living children in your family of origin, that is the family you were born into? Include yourself, together with all full brothers and sisters, half brothers and sisters, and foster brothers and sisters. (F)

____
(NUMBER)

110. How many of your brothers, half-brothers, foster brothers or step brothers are older than you? Do not count your own twin brother. (F)

____
(NUMBER)

111. How many of your sisters, half-sisters, foster sisters, or step sisters are older than you? Do not count your own twin sister. (F)

112. Do you know many people in your neighborhood? (Adapted from S&S)

☐ No, we don't know anyone there

☐ No, we don't know very many people there

☐ Yes, we know some people there

☐ Yes we know nearly everyone there

113. Do any of your close family relatives live in your neighborhood? (Adapted from S&S)

☐ No, we have no close relatives living nearby

☐ Yes, we have one or two relatives living nearby

☐ Yes, we have some relatives (3-7) living nearby

☐ Yes, we have several relatives (8-15) living nearby

☐ Yes, we have many (MORE THAN 15) relatives living nearby

109A. What was the number of children in your husband's family of origin, that is the family he was born into? Include your husband together with all his full brothers and sisters, half-brothers and sisters, and foster brothers and sisters. (F)

______________________ (number)

110A. How many of your husband's brothers, half-brothers, foster brothers or step brothers are older than him? Do not count his own twin brother if he has one. (F)

______________________ (number)

111A. How many of your husband's sisters, half-sisters, foster sisters or step sisters are older than him? Do not count his own twin sister if he has one. (F)

______________________ (number)

SECTION XIV: Responsibility for Household Tasks

114. We would like to know how you and your husband divide up some of the family jobs. Here is a list of different ways of dividing up jobs. Now, who does the grocery shopping? (B)

(HAND CARD #7)

1. HUSBAND ALWAYS
2. HUSBAND MORE THAN WIFE
3. HUSBAND AND WIFE EXACTLY THE SAME
4. WIFE MORE THAN HUSBAND
5. WIFE ALWAYS
6. CHILDREN
7. WIFE AND CHILDREN
8. HUSBAND AND CHILDREN
9. EVERYONE
10. OTHER

(number in card)

115. Who gets your husband's breakfast on work days? (B)

(NUMBER IN CARD)

116. Who does the evening dishes? (B)

(NUMBER IN CARD)

117. Who straightens up the living-room when company is coming? (B)

(NUMBER IN CARD)

118. Who mows the lawn? (B)

(NUMBER IN CARD)

119. Who shovels the sidewalk? (B)

(NUMBER IN CARD)

120. Who repairs things around the house? (B)

____
(NUMBER IN CARD)

121. Who keeps track of the money and the bills? (B)

____
(NUMBER IN CARD)

SECTION XV: RESPONSIBILITY FOR DECISIONS

122. In every family somebody has to decide such things as where the family will live and so on. Many couples talk such things over first, but the final decision often has to be made by the husband or the wife. For instance, who usually makes the final decision about what car to get? (USE CARD #7 AGAIN) (B&W)

1. HUSBAND ALWAYS
2. HUSBAND MORE THAN WIFE
3. HUSBAND AND WIFE EXACTLY THE SAME
4. WIFE MORE THAN HUSBAND
5. WIFE ALWAYS
6. CHILDREN
7. WIFE AND CHILDREN
8. HUSBAND AND CHILDREN
9. EVERYONE
10. OTHER

123. ...about whether or not to buy some life insurance?(B&W)

____
(NUMBER IN CARD)

124. ...about what house or apartment to take? (B&W)

____
(NUMBER IN CARD)

125. Who usually makes the final decision about what job your husband should take? (B &W)

____
(NUMBER IN CARD)

126. ...about whether or not you should go to work or quit work? (B&W)

____
(NUMBER IN CARD)

127. ...about how much money your family can afford to spend per week on food? (B&W)

____
(NUMBER IN CARD)

128. ...about what doctor to have when someone is sick? (B&W)

____
(NUMBER IN CARD)

129. ...and, about where to go on a vacation? (B&W)

____
(NUMBER IN CARD)

129a. ...about how many children you would have? (N&N)

____
(NUMBER IN CARD)

SECTION XVI: Your Religion

130. Do you consider yourself religious? ☐ YES ☐ NO (N&N)

131. What is your Religion? (N&N)

____

132. About how often do you attend religious services or activities? (Adapted from S&S)

____

132a. Do you feel it is possible for an individual to develop a well rounded religious life apart from the institutional church? (F&DJ)

☐ 1. YES
☐ 2. NO
☐ 3. UNCERTAIN

133. How devout or religious do you consider yourself to be? (SHOW CARD #8) (S&S)

- ☐ I AM VERY DEVOUT AND RELIGIOUS
- ☐ I AM RATHER DEVOUT AND RELIGIOUS
- ☐ I AM NOT VERY DEVOUT AND RELIGIOUS
- ☐ I AM NOT DEVOUT AND RELIGIOUS AT ALL
- ☐ I DISLIKE RELIGION

134. About how often do you pray or think seriously about religion in private? (SHOW CARD #9) (S&S)

- ☐ NEVER
- ☐ VERY RARELY
- ☐ A FEW TIMES A MONTH
- ☐ A FEW TIMES A WEEK
- ☐ EVERY DAY
- ☐ SEVERAL TIMES A DAY

SECTION XVII: Socio-economic Information

135. Where you live now, do you: (N&N)

- ☐ OWN
- ☐ RENT

136. How many rooms are in your home? Count only the rooms your family lives in. Count all bedrooms, bathrooms, kitchen, living room, dining room, recreation room, enclosed porch, etc. . (F)

________________ (NUMBER)

137 How many bathrooms do you have? (N&N)

________________ (NUMBER)

(SKIP TO #139 IF NOT RENTING)
138. If you are renting your home or the place where you live, about how much are you paying each month? (F)

____________________ (MONTHLY)

(SKIP TO #140 IF RENTING)
139. If your family has bought (or is buying) your home, what is its present value? (F)

$ ____________________

140. Please make the best estimate you can of your family's total income for last year. Include money earned by both spouses, or anyone else in household who worked. (F)
(SHOW CARD #10)

☐ UNDER $3,000
☐ $3,000 TO $4,999
☐ $5,000 TO $6,999
☐ $7,000 TO $9,999
☐ $10,000 TO $12,999
☐ $13,000 TO $15,999
☐ $16,000 TO $19,999
☐ $20,000 TO $24,999
☐ $25,000 TO $29,999
☐ $30,000 TO $34,999
☐ $35,000 OR ABOVE

141. Which of the following best describes your family's finances? (F)

☐ BARELY ABLE TO MAKE A LIVING
☐ HAVING THE NECESSITIES
☐ COMFORTABLE
☐ WELL-TO-DO
☐ WEALTHY
☐ EXTREMELY WEALTHY

142. How many cars, trucks, or station wagons does your family own? Include your own as well as any owned by your husband, or sons, or daughters living in your home. (F)

____________________ (NUMBER)

143. Have your living conditions been better or poorer than those of your parents while you were growing up? (E)
(SHOW CARD #11)

- ☐ OURS HAVE BEEN MUCH POORER
- ☐ SOMEWHAT POORER
- ☐ SAME
- ☐ SOMEWHAT BETTER
- ☐ MUCH BETTER

144. Have your living conditions been better or poorer than those of your husband's parents while he was growing up? (E)
(SHOW CARD #11 AGAIN)

- ☐ OURS HAVE BEEN MUCH POORER
- ☐ SOMEWHAT POORER
- ☐ SAME
- ☐ SOMEWHAT BETTER
- ☐ MUCH BETTER

SECTION XVIII: Consumption and Financial Behavior

145. Do you or your husband have a savings account? (N&N)

- ☐ YES (GO ON TO #146)
- ☐ NO (SKIP TO #147)
- ☐ DON'T KNOW (GO ON TO #146)

146. Which one of the following statements tells best what you do about savings? (F) (SHOW CARD #12)

- ☐ DON'T SAVE VERY MUCH
- ☐ SAVE OCCASIONALLY
- ☐ SAVE A DEFINITE AMOUNT AND SPEND WHATEVER REMAINS
- ☐ SAVE EVERY CENT I CAN

147. Do you or your husband invest in securities, stocks or bonds? (N&N)

☐ YES

☐ NO

☐ DON'T KNOW

148. Do you or your husband invest in real estate?(N&N)

☐ YES

☐ NO

☐ DON'T KNOW

149. Which one of the following tells best how you pay for things you buy? (SHOW CARD #13) (F)

☐ EVERYTHING ON THE INSTALLMENT PLAN

☐ LARGE PURCHASES ON THE INSTALLMENT PLAN

☐ PAY CASH FOR EVERYTHING EXCEPT LARGE PURCHASES (HOME NOT INCLUDED)

☐ ALWAYS PAY CASH FOR EVERYTHING

150. What are the most important things for which you are now saving? (N&N)

____

____

SECTION XIX: Basic Satisfaction with Life and Happiness Questions

151. Taking all things together, how would you say things are these days? Would you say you're very happy, pretty happy, or not too happy these days? (GVF)

☐ NOT TOO HAPPY

☐ PRETTY HAPPY

☐ VERY HAPPY

152. In general, how satisfying do you find the way you're spending your life these days? Would you call it completely satisfying, pretty satisfying, or not very satisfying? (C&R)

- ☐ NOT VERY SATISFYING
- ☐ PRETTY SATISFYING
- ☐ COMPLETELY SATISFYING

153. All of us want certain things out of life. When you think about what really matters in your own life, what are your wishes and hopes for the future? In other words, if you imagine your future in the best possible light, what would your life look like then, if you are to be happy? Take your time in answering; such things aren't easily put into words. (CA)

____

____

____

154. Now taking the other side of the picture, what are your fears and worries about the future? In other words, if you imagine your future in the worst possible light, what would your life look like then? Again, take your time in answering. (CA)

____

____

155. Here is a picture of a ladder. (SHOW CARD #14). Suppose we say that at the top of the ladder (POINTING TO THE VALUE 10) represents the best possible life for you, and the bottom (POINTING TO THE VALUE 0) represents the worst possible life for you. Where would you place yourself right now? (CA)

LADDER VALUE:

10
9
8
7
6
5
4
3
2
1
0

SECTION XX: The Meaning of Children

156. What do you believe are the advantages of a large family? (S)

157. What are the advantages of a small family? (N&N)

158. What are some of the pleasures of having children? (N&N)

159. What are some of the difficulties of having children? (N&N)

____

____

____

____

SECTION XXI: Knowledge and Practice of Birth Control

160. Now, what about the different ways people can use to keep from getting pregnant? What methods do you know of? (Adapted from R)

☐ CONDOM OR RUBBER
☐ DIAPHRAGM WITH JELLY
☐ WITHDRAWAL (OR PULLING OUT)
☐ RHYTHM METHOD (OR SAFE PERIOD)
☐ DOUCHE
☐ JELLY OR CREAM WITHOUT A DIAPHRAGM
☐ SUPPOSITORIES
☐ PILL THAT THE WOMAN TAKES 20 DAYS A MONTH
☐ INTRA-UTERINE DEVICE
☐ FEMALE STERILIZATION
☐ MALE STERILIZATION

161. Have you ever used a birth control method? (N&N)

☐ YES (Skip to #163)
☐ NO

162. If no, why don't you use them? (N&N)

____

____

____

____

163. When did you decide for the first time to limit the number of children you wished to have? (S)

☐ BEFORE MARRIAGE
☐ BEFORE OUR FIRST CHILD
☐ AFTER OUR FIRST CHILD
☐ AFTER OUR SECOND CHILD
☐ AFTER OUR THIRD CHILD
☐ AFTER OUR FOURTH CHILD
☐ I DON'T KNOW
☐ NEVER
☐ NOT NECESSARY BECAUSE PHYSICAL CONDITIONS PREVENTED FERTILITY

164. Briefly describe the physical appearance of the respondent, the way she was dressed, her manner, appearance, add anything you feel might help in adding to our picture of the respondent. (R)

165. What was her approach to the interview? Describe how she acted. (N&N)

166. Respondent's cooperation was: (R&D)

1. Very good
2. Good
3. Fair
4. Poor

167. Other persons present at interview were: (R&D)
(Circle as many as necessary)

1. No one
2. Children under 6
3. Older children
4. Husband
5. Other relatives
6. Other adults

168. Is this interview of questionable quality, generally adequate or high quality? (R&D)

1. Questionable Quality
2. Adequate
3. High Quality

169. (If Questionable Quality) Reason for this: (R&D)

1. Spoke English poorly
2. Evasive, suspicious
3. Drunk, mentally disturbed
4. Had poor hearing or vision
5. Low intelligence
6. Confused by frequent interruption
7. Bored or uninterested

170. Note anything else essential to the understanding and interpretation of this interview: (Use last page if necessary) (R&D)

OBSERVATION INVENTORY (Laumann & House, 1970)

Interviewer: Carry through observation of living room while respondent is filling out scales. If the interview does not take place in the living room, utilize the scheme of observation so far as meaningful. If no opportunity for observation or if observation cannot be completed, please indicate reason here.

1. Room in which interview takes place:

☐ living room

☐ living area/ kitchen

☐ other, where? ______________________

2. Size of Room:

☐ length approx. __________ feet, width approximately ______ feet

☐ If space is not rectangular, estimate square feet:

☐ approx. ________ square feet.

3. Windows:

☐ window to the floor, glass wall

☐ large window

☐ normal window

☐ small window

☐ Number of windows: ____________________

4. Style of furnishing:

☐ Modern functional

☐ Traditional American

☐ Bulky old-fashioned, stuffed

☐ Mixture, no consistent style

☐ Other ____

5. Condition of Furniture:

☐ well maintained (preserved) ☐ average ☐ used (worn)

6. Floor:

☐ unpolished wood floor (planks)

☐ polished wood floor (parquet)

☐ plastic covering (asphalt tiles, linoleum)

☐ stone floor (artificial stone, marble, brick)

☐ rug covering

☐ other, what? ______________________________

7. Type and Pattern of rug (multiple entries with type of rug)

☐ carpet

☐ normal large carpet

☐ rugs, runners

☐ braided carpets, hemp, sisal corn

☐ other what? ____________________________

☐ no rug

****

☐ One color

☐ oriental (Persian)

☐ geometric

☐ flowers

☐ ornamental

8. Walls, Color:

☐ neutral color, pastel subdued

☐ strong color, bright, shining

☐ walls of different colors, painted/wallpapered

9. **Walls, pattern:**

☐ a) one color

☐ small pattern → continue with 9b

☐ large pattern → continue with 9b

☐ b) flower pattern

☐ striped pattern

☐ abstract pattern

☐ ornamental

10. **Covering on sofa:**

☐ cloth

☐ leather

☐ artificial leather

☐ hide (with fur)

☐ other, what? ____________________

☐ no sofa

11. Cover of Chairs in seating group (several entries)

☐ cloth

☐ leather

☐ artificial leather

☐ hide (with fur)

☐ other, what? ________________

☐ No chair in seating group

12. Seating group

☐ a) Sofa and chair fit together

☐ Sofa and related chair have different colored cover

☐ Sofa and chair do not fit together

☐ b) Sitting group provides places for __________ persons.

☐ c) Sitting group stands in the open room

☐ Sitting group stands at the wall/ in the corner

13. Cupboards (several entries)

☐ Wall cupboard

☐ Wall shelves, (connecting elements for shelving usually framework made out of metal)

☐ Individual open shelves

☐ Bookcase

☐ Customary cupboard

☐ Showcase (glass case)

☐ Old buffet

☐ Sideboard, dresser

☐ Other, what? ______________________________

14. Television set:

☐ No television set visible ____________________ continue with 16.

☐ Television set in wall cabinet

☐ Television set on own/ suitable stand/table

☐ Television set on any other furniture

15. Television set/housing

☐ wood, wood imitation

☐ lockered, artificial material, plastic

16. Books

☐	a)	no books	(Skip to #17)
☐		some books	(Skip to #16b)
☐		many books in shelves or book cases	(Go to #16b)
☐	b)	Predominantly bookclub books	
☐		Predominantly other bound books	
☐		Predominantly pocket books	

17. Drapes and curtains

☐ Only drapes	(Go to #19 then #20)
☐ Only curtains	(Go to #18)
☐ Both	(Go to #18 and #19)
☐ Neither	(Go to #20)

18. Curtains, transparent

☐ a) gathered up, draped, ruffled

☐ straight hanging

☐ window drapes

☐ b) lace

☐ smooth weave

19. Drapes (nontransparent)

☐ a) gathered up, draped
☐ straight hanging
☐ b) length short, to windowsill
☐ length to floor
☐ c) Light color, neutral
☐ dark color, strong, shiny
☐ d) one color
☐ several colors
☐ e) flower pattern
☐ ornamental pattern
☐ geometric pattern
☐ striped pattern

20. Spaciousness

☐ very empty
☐ underfurnished
☐ normally furnished
☐ overfurnished
☐ stuffed

21. General order

☐ extraordinarily tidy
☐ normal tidiness (all things in their places)
☐ untidy (in disorder)

OBSERVATION INVENTORY (Laumann & House,1970)

22. General Condition of Living Room Furnishing:

☐ luxurious

☐ average

☐ poor

23. Theme of pictures

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

24. If pictures: Frame of picture (several entries)

☐ Modern Frames (simple, smooth)

☐ Old Frames (heavy, embellished, broad)

☐ Pictures without frames

25. Please check objects which are to be found in the room:

- ☐ high table with chairs
- ☐ desk
- ☐ rocking chair
- ☐ high backed recling chair
- ☐ bar
- ☐ open fireplace
- ☐ piano, grand piano
- ☐ fountain
- ☐ bierstein, e.g. ornamental dishware, metal plates
- ☐ cut flowers
- ☐ cut flowers
- ☐ artificial flowers
- ☐ potted plants
- ☐ flower table (for potted plants)

- ☐ trophies, documents, horns
- ☐ mottoes, epigrams
- ☐ cloth wall hangings
- ☐ table cloth
- ☐ pillows
- ☐ antimacassars
- ☐ family photographs
- ☐ cross
- ☐ holy pictures
- ☐ holy statues

26. If the following objects are at hand, please check whether old or modern:

	OLD	MODERN
☐ Mirror (frame)		
☐ lamps		
☐ knickknacks (figurines)		
☐ vases		
☐ candelabra		
☐ ashtrays		
☐ sculpture		
☐ clock		

When respondent finishes the scales end the interview.

SCALE NAME: Self-Esteem Scale

AUTHOR: M. Rosenberg

VARIABLE: The scale measures self-attitudes along a favorable-to-unfavorable dimension.

DESCRIPTION: High self-esteem as defined by the author means that the individual respects himself, considers himself worthy, does not consider himself better or worse than others and recognizes his limitations and expects to grow and improve. The test is composed of ten items requiring one of four answers; strongly agree, agree, disagree, and strongly disagree. Positively and negatively worded items were presented alternately to reduce the possibility of response set. (Taken from J. Robinson and P. Shaver. Measures of Social Psychological Attitudes. p. 98-99.

BASIC REFERENCE: Rosenberg, M. Society and the Adolescent Self-image. Princeton, New Jersey; Princeton University Press, 1965.

Contract No. NIH 70-2195
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Expiration Date: 31 May 1973

Self-esteem Scale (Rosenberg, 1965)

Please answer the following statements according to whether you strongly agree, agree, disagree, or strongly disagree. Make a check mark (✓) next to that alternative which best reflects your feelings.

1. One the whole, I am satisfied with myself.

____ strongly agree
____ agree
____ disagree
____ strongly disagree

2. At times I think I am no good at all.

____ strongly agree
____ agree
____ disagree
____ strongly disagree

3. I feel that I have a number of good qualities.

____ strongly agree
____ agree
____ disagree
____ strongly disagree

4. I am able to do things as well as most other people.

____ strongly agree
____ agree
____ disagree
____ strongly disagree

5. I feel I do not have much to be proud of.

____ strongly agree
____ agree
____ disagree
____ strongly disagree

6. I certainly feel useless at times

____ strongly agree
____ agree
____ disagree
____ strongly disagree

SELF- ESTEEM SCALE (Rosenberg, 1965)

7. I feel that I am a person of worth, at least on an equal plane with others.

____strongly agree
____agree
____disagree
____strongly disagree

8. I wish I could have more respect for myself.

____strongly agree
____agree
____disagree
____strongly disagree

9. All in all, I am inclined to feel that I am a failure.

____strongly agree
____agree
____disagree
____strongly disagree

10. I take a positive attitude toward myself.

____strongly agree
____agree
____disagree
____strongly disagree

ADAPTATION OF MULTI-DIMENSIONAL I-E SCALE (Strumpel, 1971)

Here are some questions about how you feel about things. In these next questions you will find two statements and I would like you to check (✓) that statement which comes closest to the way you feel.

1. Are you the kind of person that:

____ plans his life ahead all the time - or -
____ lives more from day to day?

2. Would you rather:

____ do things that are difficult and challenging - or -
____ do things that you're sure you know how to do?

3. Would you say that:

____ most people can be trusted - or -
____ you can't be too careful in your dealings with people?

4. Would you say that you were:

____ always hard-working - or -
____ somebody who sometimes takes things easy?

5. Would you say that:

____most people are more inclined to help others - or -
____ most people are more inclined to look out for themselves?

6. Do you:

____ think a lot about things that might happen in the future - or -
____ do you usually just take things as they come?

7. Would you rather:

___ spend your money and enjoy life today-or -
____ save more for the future

ADAPTATION OF MULTIDIMENSIONAL I-E SCALE (Strumpel,1971)

In each of the next questions, there are two sentences. Would you check (✓) the one that comes closest to the way you feel things actually are in life. Be sure it's the way things actually are in life, not the way you'd like them to be.

8. Which of these first two statements is closest to the way you feel things actuallly are?

____ Many times I feel that I have little influence over the things that happen to me. - or -

____ It is impossible for me to believe that chance or luck play an important role in my life.

9. Which of these two?

____ Becoming a success is a matter of hard work; luck has little or nothing to do with it. - or -

____ Getting a good job depends mainly on being in the right place at the right time.

10. And these?

____ When I make plans, I am almost certain that I can make them work. - or -
____ It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad luck anyhow.

11. Which of these?

____ What happens to me is my own doing. - or -
____ Sometimes I feel that I don't have enough control over the direction my life is taking.

12. And these?

____ Knowing the right people is important in deciding whether a person will get ahead. - or -
____ People will get ahead in life if they have the goods and do a good job; knowing the right people has nothing to do with it.

13. How about these?

____ People who don't do well in life often work hard, but the breaks just don't come their way. - or -

____ Some people just don't use the breaks that come their way; if they don't do well it's their own fault.

14. And these?

____ I've usually felt pretty sure my life would work out the way I want it to. - or -

____ There are times when I haven't been very sure that my life would work out the way I wanted it to.

Now I have a few questions concerning poverty and unemployment. People have different ideas about poverty and unemployment -- I'd like to ask you about your ideas.

15. Which of these two statements is closer to the way you feel?

____ People who are born poor have less chance to get ahead than other people. - or -

____ People who have the ability and work hard have the same chance as anyone else, even if their parents were poor.

16. Which of these two statements is closer to how you feel?

____ It's the lack of skills and abilities that keep most unemployed people from getting a job; if they had the skills most of them could get a job. - or -

____ Many people with skills can't get a job; there just aren't any jobs for them.

17. Which of these?

____ Most people who are unemployed just haven't had the right breaks in life. - or -

____ Most people who are unemployed have had the opportunities; they haven't made use of the opportunities that came their way.

APPENDIX C

FATHER'S QUESTIONNAIRE

DIRECTIONS:

THE FOLLOWING QUESTIONNAIRE IS A SHORT VERSION OF THE MOTHER'S INTERVIEW. WE HAVE TRIED TO MAKE IT AS BRIEF AND CLEAR AS POSSIBLE. IF, IN SOME CASES YOU DO NOT FIND ALTERNATIVES THAT BEST DESCRIBE YOUR FEELINGS, OR FIT YOUR PARTICULAR SITUATION, WRITE YOUR COMMENTS ON THE MARGIN. IT IS VERY DIFFICULT TO PUT TOGETHER A QUESTIONNAIRE THAT APPLIES TO EVERYONE.

PLEASE PRINT THE ANSWERS TO THE QUESTIONS, OR CHECK (✓) THE APPROPRIATE ANSWER. THANK YOU.

1. ____________ (First Name) ____________ (Middle) ____________ (Last Name)

2. Home Address: ______________________ Street ______________________ City or Town

3. Occupation: (Please be specific) ______________________

____

4. Before you were married, how many children in total did you think you would have? (If you have been married more than once, answer according to what you thought before your first marriage.) (N&N)

____

5. How many children do you have? (N&N)

____

6. Do you think the number of children you have is a good number? (N&N)

Yes ☐ No ☐

If no, what number would be good for you?

____

7. Would you like to have more children? (N&N)

No ☐ Uncertain ☐ Yes ☐

If yes, how many more children?

____

8. In your opinion, how many children is too few for a couple to have? (F&T)

______________children

9. In your opinion, how many children is too many for a couple to have? (F&T)

____________________child (ren)

10. What do you believe are the advantages of a large family? (S)

11. What are the advantages of a small family? (N&N)

12. What is the best length of time between children? (N&N)

13. Here is a list of free-time activities; we would like to know about how often you have been doing these things during the past year. For example, "Going to the movies." Would you say that you've generally been going to the movies, every day, twice a week, once a week, every two to three weeks, six to twelve times a year, one to five times a year, or not at all this year? To answer, check the category that best represents your situation. (In those activities that are seasonal, please try to get an average for the whole year.) (C&R)

	Every Day	Twice/Week	Once/Week	2 to 3 Weeks	6 to 12 Times	1 to 5 Times	Not at all
a) Going to the movies (C&R)							
b) Going to classes or lectures	(C&R)						
c) Going to watch sports events	(C&R)						
d) Fishing, hunting, camping hunting	(C&R)						
e) Boating, swimming, picnics pleasure drives	(C&R)						
f) Playing active sports: Bowling, softball, etc.	(C&R)						
g) Going to nightclubs, bars	(C&R)						
h) Going to fairs, museums Exhibits, etc.	(C&R)						
i) Gardening and working around the house	(C&R)						
j) Making and fixing things around the house	C&R)						
k) Shopping except for groceries	(C&R)						
l) Helping relatives, neighbors	(C&R)						
m) Playing cards and other indoor games	(C&R)						
n) Working on hobbies, painting or music	(C&R)						
o) Visiting with friends of the same sex	(N&N)						
p) Volunteering in community or social projects	(N&N)						
q) Going out to dinner	(N&N)						

14. How many hours of T. V. do you watch on a regular day? (N&N)

____

15. How many hours of reading do you do on a regular day? (Include reading magazines, newspapers, books) (N&N)

____

16. We would like to know how your family divides up some of the family jobs. Here is a list of different ways of dividing up jobs. Please use the number of the alternative listed below that best fits your situation. (B)

1. HUSBAND ALWAYS
2. HUSBAND MORE THAN WIFE
3. HUSBAND AND WIFE ABOUT THE SAME
4. WIFE MORE THAN HUSBAND
5. WIFE ALWAYS
6. CHILDREN
7. WIFE AND CHILDREN
8. HUSBAND AND CHILDREN
9. EVERYONE
10. OTHER

a. Who does the grocery shopping? (B) ______________ (number)

b. Who gets your breakfast on work days? (B) ______________ (number)

c. Who does the evening dishes? (B) ______________ (number)

d. Who straightens up the living-room when company is coming? (B) ______________ (Number)

e. Who mows the lawn? (B) ______________ (number)

f. Who shovels the sidewalk or driveway? (B) ______________ (number)

g. Who repairs things around the house? (B) ______________ (number)

h. Who keeps track of the money and the bills? (B) ______________ (number)

17. In every family somebody has to decide such things as where the family will live and so on. Many couples talk such things over first, but the final decision often has to be made by the husband or wife. Use number alternative below that best suits your situation. (B&W)

1. HUSBAND
2. HUSBAND MORE THAN WIFE
3. HUSBAND AND WIFE ABOUT THE SAME
4. WIFE MORE THAN HUSBAND
5., WIFE ALWAYS

a. Who usually makes the decision about what car to get? (B&W)

____
(number)

b. . . . about whether or not to buy some life insurance? (B&W)

____
(number)

c. . . . about what house or apartment to take? (B&W)

____
(number)

d. . . . about what job you should take (B&W)

____
(number)

e. . . . about whether your wife should go to work or quit work ?(B&W)

____
(number)

f. . . . about how much money your family can afford to spend per week on food ?(B&W)

____
(number)

g. . . . about what doctor to have when someone is sick? (B&W)

____
(number)

h. . . . about where to go on a vacation? (B&W)

______________________________ (number)

i. Who made the decision about how many children you would have? (N&N)

______________________________ (number)

---

18. Do you consider yourself to be religious? Yes ☐ No ☐ (N&N)

19. What is your religion? (N&N)

____

20. About how often do you attend religious services or activities? (Adapted from S&S)

____

---

21. Taking all things together, how would you say things are these days? Would you say you're very happy, pretty happy, or not too happy these days. (GVF)

____________Very happy

____________Pretty happy

____________Not too happy

22. In general, how satisfying do you find the way you're spending your life these days? Would you call it completely satisfying, pretty satisfying, or not very satisfying? (C&R)

____________Completely satisfying

____________Pretty satisfying

____________Not very satisfying

23. All of us want certain things out of life. Considering what really matters in your own life, what are your wishes and hopes for the future? In other words, if you imagine your future in the best possible light, what would your life look like then? (CA)

____

____

____

24. Now taking the other side of the picture, what are your fears and worries about the future? In other words, if you imagine your future in the worst possible light, what would your life look like then? (CA)

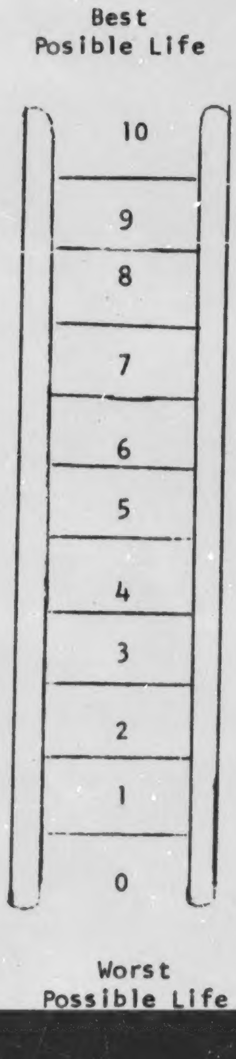
____

____

____

25. Here is a picture of a ladder. Suppose we say that the top of the ladder represents the best possible life for you and the bottom represents the worst possible life for you. Where would you place yourself right now? (CA)

Ladder value: _____


Best
Posible Life
10
9
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Worst
Possible Life

APPENDIX D

Family Research Project
Institute of Human Sciences
Boston College
Chestnut Hill, Mass. 02167

CHILDREN'S

GENERAL BACKGROUND

QUESTIONNAIRE

Dear Student,

The questionnaire that you are about to take will be of great value to you and to people your age all over the United States. The object of this study is to provide you and your generation with information about families and their life styles. From the results of this study we hope to be able to tell you who will be making decisions about marriage in the future what different families do for recreation, who makes what decisions, how husbands and wives divide up their jobs, and many other aspects of family life.

This questionnaire asks for some general background information about you and your family. It should take you no longer than twenty minutes to complete. There is, however, no time limit. Please answer all questions completely, in pencil or ink. Please print.

Thank you,

Ronald L. Nuttall

Ronald L. Nuttall, Ph.D.
Project Director

1. PRINT your full name in the boxes below, putting only one letter in each box. Do not write your "nickname." (N&N)

A. First name										
B. Second name										
C. Last name										

2. On what date were you born? (N&N) ______ MONTH ______ DAY ______ YEAR

3. Are you a boy or a girl? (N&N)

_____ (1) Boy
_____ (2) Girl

4. What grade are you in? (N&N)

_____ (1) Seventh grade
_____ (2) Eighth grade
_____ (3) Ninth grade
_____ ( ) Tenth grade
_____ ( ) Eleventh grade
_____ ( ) Twelfth grade

5. On the average, how many hours do you study each week? Include study periods in school as well as studying done at home. (F)

_____ (1) None
_____ (2) About one to four hours per week
_____ (3) About five to nine hours per week
_____ (4) About ten to fourteen hours per week
_____ (5) About fifteen to nineteen hours per week
_____ (6) About twenty or more hours per week

6. On the average, how many hours a week do you spend doing chores around the house? (F)

_____ (1) None
_____ (2) One to three
_____ (3) Four to six
_____ (4) Seven to nine
_____ (5) Ten to twelve
_____ (6) Thirteen or more

7. How many athletic teams have you been a member of in the last three years? Count intramural church, school and any other teams. (F)

_____ (1) None
_____ (2) One team
_____ (3) Two teams
_____ (4) Three teams
_____ (5) Four or more teams

8. How many clubs or organizations (other than athletic) have you belonged to in the last three years? (F)

_____ (1) None
_____ (2) One club or organization
_____ (3) Two clubs or organizations
_____ (4) Three clubs or organizations
_____ (5) Four or more clubs or organizations

9. How many best friends do you have? (N&N)

_____ (1) None
_____ (2) One
_____ (3) Two
_____ (4) Three
_____ (5) Four or more

10. How many of your best friends attend your school? (N&N)

_____ (1) None
_____ (2) One
_____ (3) Two
_____ (4) Three
_____ (5) Four or more

11. Which of your best friends attend your school? (N&N)

FIRST NAME	(NICKNAME, IF ANY)	LAST NAME

(If you need additional space, use the reverse side of this sheet)

12. How active have you been in any one or more of the following organizations? (F)

A. Informal neighborhood groups (a group of kids from your area who do things together)

_____ (1) Not a member of any of these groups
_____ (2) A member, but not very active
_____ (3) Fairly active
_____ (4) Very active
_____ (5) Extremely active

B. Church, religious or charitable organizations. (F)

_____ (1) Not a member or any of these organizations
_____ (2) A member, but not very active
_____ (3) Fairly active
_____ (4) Very Active
_____ (5) Extremely active

C. Political clubs or organizations. (F)

_____ (1) Not a member of any of these organizations
_____ (2) A member, but not very active
_____ (3) Fairly active
_____ (4) Very active
_____ (5) Extremely active

D. Social clubs, fraternities or sororities. (F)

_____ (1) Not a member of any of these organizations
_____ (2) A member, but not very active
_____ (3) Fairly active
_____ (4) Very active
_____ (5) Extremely active

13. (FOR BOYS)
About how many hours a week do you spend doing things with, talking to, or being with girls who are not related to you? (F)

_____ (1) None
_____ (2) One to six hours per week
_____ (3) Seven to twelve hours per week
_____ (4) Thirteen to 25 hours per week
_____ (5) Over 25 hours per week

13. (FOR GIRLS)
About how many hours a week do you spend doing things with, talking to, or being with boys who are not related to you? (F)

_____ (1) None
_____ (2) One to six hours per week
_____ (3) Seven to twelve hours per week
_____ (4) Thirteen to 25 hours per week
_____ (5) Over 25 hours per week

14. How important to you is getting a job and starting to earn a living as soon as possible? (F)

_____ (1) Extremely important
_____ (2) Very important
_____ (3) Important
_____ (4) Neither important or unimportant
_____ (5) Unimportant

15. When do you plan to start college? (F)

_____ (1) I don't plan to go to college
_____ (2) I may go to college sometime in the future, but my plans are not definite
_____ (3) I plan to start college after I have worked a few years
_____ (4) I plan to start college after completing military service
_____ (5) I plan to start college right after high school

16. If something happened and you had to stop school now, how would you feel? (C)

_____ (1) Very happy -- I'd like to quit
_____ (2) I wouldn't care one way or the other
_____ (3) I would be disappointed
_____ (4) I'd try hard to continue
_____ (5) I would do almost anything to stay in school

17. How bright or intelligent do you think you are in comparison with the other students in your grade? (C)

_____ (1) Among the lowest
_____ (2) Below average
_____ (3) Average
_____ (4) Above average
_____ (5) Among the brightest

18. Below is a long list of different occupations in alphabetical order. Please look over it carefully and choose one single occupation you would most like to make your career after you have completed your education, assuming you could do exactly what you wanted. NOTE THAT THIS LIST CONTINUES ONTO THE FOLLOWING PAGE. If your choice is not on the list, choose the one that is closest to it. Choose one of the occupations, even if you have not definitely made up your mind. (F)

_____ (4) Accountant or auditor
_____ (6) Architect or building designer
_____ (5) Armed forces officer
_____ (4) Artist, sculptor, designer
_____ (2) Barber, beautician or similar worker
_____ (6) Biological scientist (biologist, botanist, physiologist, zoologist, etc.)
_____ (4) Businessman (owner or proprietor)
_____ (3) Clergyman (priest, nun, monk, minister rabbi, etc.)
_____ (7) College or high school administrator (president, principal, dean, etc.)
_____ (6) College professor
_____ (3) Craftsman
_____ (6) Dentist
_____ (5) Draftsman or surveyor
_____ (3) Elementary school teacher
_____ (6) Engineer (civil, mechanical, electrical, aeronautical, chemical, etc.)
_____ (4) Engineering or scientific helper and assistant
_____ (2) Enlisted man in the armed forces

____ (5) Entertainer, actor, actress
____ (6) Large farm owner or manager
____ (3) Small farm owner or manager
____ (2) Farm or ranch worker
____ (4) Foreman or forewoman in a factory or mine
____ (2) Forester, conservation worker, fisherman
____ (4) Government leader (mayor, senator, judge, etc.)
____ (5) High school teacher
____ (9) Housewife
____ (6) Lawyer
____ (5) Librarian
____ (6) Manager in business, finance or industry
____ (6) Mathematician
____ (4) Medical or dental technician
____ (2) Miner
____ (4) Musician
____ (5) Nurse, physical or occupational therapist
____ (3) Office clerk, file clerk, office worker, bookkeeper, bank teller
____ (1) Ordinary worker or laborer
____ (6) Pharmacist, optometrist, chiropractor, etc.
____ (6) Physical scientist (chemist, physicist, geologist, astronomer, etc.)
____ (7) Physician or surgeon
____ (3) Policeman, fireman or other protective service
____ (5) Political scientist or economist
____ (2) Private household worker such as maid, housekeeper, laundress, butler, etc.
____ (5) Professional sportplayer
____ (5) Reporter or editor on a newspaper or magazine
____ (3) Salesman or saleswoman
____ (2) Semi-skilled worker (such as factory machine operator, meat cutter, etc.)
____ (5) Social worker or welfare worker
____ (5) Sociologist or psychologist
____ (4) Structural worker (electrician, plumber, printer, machinist, etc.)
____ (2) Transportation worker (bus driver, cab driver, chauffeur, railroad worker)
____ (2) Waiter or waitress
____ (5) Writer
____ (6) Veterinarian
____ (8) Business occupation not listed above.

(What one? ______________________________)

____ (8) Professional occupation not listed above.

(What one? ______________________________)

____ (8) Scientific occupation not listed above.

(What one? ______________________________)

____ (8) Technical occupation not listed above.

(What one? ______________________________)

____ (8) Other occupation not listed above.

(What one? ______________________________)

19. How old do you expect to be when you get married? (F)

_____ (1) I am already married
_____ (2) 17 years old or younger
_____ (3) 18 years old
_____ (4) 19 years old
_____ (5) 20 years old
_____ (6) 21 or 22 years old
_____ (7) 23 or 24 years old
_____ (8) 25 or 26 years old
_____ (9) 27 to 29 years old
_____ (10) 30 to 35 years old
_____ (11) 36 years old or older
_____ (12) I don't expect to marry
_____ (13) I haven't really thought about it

20. How many children do you expect to have after you marry? (F)

_____ (1) None
_____ (2) One child
_____ (3) Two children
_____ (4) Three children
_____ (5) Four children
_____ (6) Five children
_____ (7) Six children
_____ (8) Seven children
_____ (9) Eight children
_____ (10) As many as God sends
_____ (99) I haven't really thought about it

21. How soon after marriage do you think a couple should have their first child? (S)

_____ (1) Less than nine months
_____ (2) Nine months
_____ (3) Ten months
_____ (4) Eleven months
_____ (5) One year
_____ (6) Fifteen months
_____ (7) Eighteen months
_____ (8) Two years
_____ (9) Two and a half years
_____ (10) Three years
_____ (11) Three and a half years
_____ (12) Four years
_____ (13) Five to six years
_____ (14) Seven to eight years
_____ (15) Nine or more years

22. How soon after the first child do you think a couple should have the second child, if they plan on having a second child? (N&N)

_____ (1) Nine months
_____ (2) Ten months
_____ (3) Eleven months
_____ (4) One year
_____ (5) Fifteen months
_____ (6) Eighteen months
_____ (7) Two years
_____ (8) Two and a half years
_____ (9) Three years
_____ (10) Three and a half years
_____ (11) Four years
_____ (12) Five to six years
_____ (13) Seven to eight years
_____ (14) Nine or more years

23. What kind of family would you like to have? (S)

_____ (1) All girls
_____ (2) More girls than boys
_____ (3) An equal number of each
_____ (4) More boys than girls
_____ (5) All boys
_____ (6) No children

24. About how often do you attend religious services or activities at your church (or wherever your religion has ceremonies)? (S&S)

_____ (1) Never
_____ (2) Less than once a month
_____ (3) About once a month
_____ (4) A few times a month
_____ (5) Once a week
_____ (6) A few times a week
_____ (7) Every day

25. About how often do you pray or think seriously about religion in private (that is, when you are not in church)? (S&S)

_____ (1) Never
_____ (2) Very rarely
_____ (3) A few times a month
_____ (4) A few times a week
_____ (5) Every day
_____ (6) Several times a day

26. How devout or religious do you consider yourself to be? (S&S)

_____ (1) I dislike religion
_____ (2) I am not devout or religious at all
_____ (3) I am not very devout and religious
_____ (4) I am somewhat devout and religious
_____ (5) I am rather devout and religious
_____ (6) I am very devout and religious

27. Which religion do you prefer? (S&S)

_____ (1) The Roman Catholic religion
_____ (2) The Jewish religion
_____ (3) The Protestant religion
_____ (4) The Muslim religion
_____ (5) The Hindu religion
_____ (6) The Buddhist religion
_____ (7) Some other religion ______________________
(PLEASE SPECIFY)
_____ (8) I believe in God but do not like organized religion
_____ (9) I do not believe in God or any religion

28. About how many months did your father (or step-father or foster father, etc.) live at home with you last year? (S&S)

_____ (1) Not at all. He never lived at home
_____ (2) Less than one month
_____ (3) About two months
_____ (4) About three months
_____ (5) About four months
_____ (6) About five months
_____ (7) About six or seven months
_____ (8) About eight or nine months
_____ (9) About ten or eleven months
_____ (10) All the time (twelve months)

SCALE NAME: Children's Reports of Parental Behavior

AUTHOR: Earl S. Schaefer

COPYRIGHT: None

VARIABLE: The set of scales are designed to collect children's reports of parental behavior.

DESCRIPTION: The motivation for the CRPBI comes from the accumulating evidence that children's reports of parental behavior were valid. The inventory itself (earlier version) consists of twenty-six self-administering scales, each including ten items designed to sample a child's perception of a particular concept of parental behavior. Each of the ten items within the scales describes relevant, specific, observable parental behavior. The child is instructed to indicate whether the item was "like" or "not like" his parents. Separate but identical forms are provided for each parent. Each of the concepts, in turn related to molar dimensions of parental behavior which were variants of two dimensions: love versus hostility and autonomy versus control. (Taken from O. G. Johnson and J. W. Bommarito. Tests and Measurements in Child Development: A Handbook. p. 255-256.

BASIC REFERENCE: Schaefer, E. S. Children's Reports of Parental Behavior: An Inventory. Child Development, 1965, 36, 413-424.

Schaefer, E. S. A Configurational Analysis of Children's Reports of Parental Behavior. Journal of Consulting Psychology 1965, 29, 552-557.

Children's Report of Parental Behavior Questionnaire
(CRPBI)

Family Research Project
Institute of Human Sciences
Boston College, Mass. 02167

Father's Form

Dear Student,

The questionnaire that you are about to take will be of great value to you and to people your age all over the United States. The object of this study is to provide you and your generation with information about family life and its effect on children and parents. From the results of this study we hope to be able to tell you who will be making decisions about marriage in the future what life is like in different types of families, such as big and small families, families with a preponderance of girls or of boys, and others.

As you go through the different questionnaires-- some of which you will find interesting and some of which you will not find interesting-- remember that it is this type of information that will help people make important decisions in the future.

On this questionnaire we are interested in learning more about the different experiences individuals have in their families. We are, therefore, asking you to report your experiences during childhood.

If you are under sixteen and have lived at home up to this time, answer the questions as they describe what happens in your home now. If you left home before the age of sixteen, answer as you would have before you left home. If you are over sixteen and had always lived at home up to that time, answer as you would have around the age of sixteen. If you did not grow up with your real mother or father, but someone took the place of that person in your life, please describe that person.

Follow the directions printed on the answer sheet and enter your name, sex, birthday and grade in the spaces provided on both answer sheets. For PART A answer sheet, mark "A" where "FORM OF THIS TEST IS:..." appears. For PART B answer sheet, mark "B" where "FORM OF THIS TEST IS: ..." appears. When you are told to begin, read question number one on the test and mark your answer to that question in one of the three boxes next to number one.

DO NOT USE BOXES LABELLED "D" OR "E" FOR ANY ANSWER. There are spaces provided for the first 160 questions on the front of the form. Use the spaces provided on the reverse side of the form to complete the questionnaire. The last blank you will use on each form is number 192. When you complete PART A, use a new answer sheet to go on to PART B.

Read each item on the following pages and mark the answer on the answer sheet that most closely describes the way each of your parents acts toward you. BE SURE TO MARK EACH ITEM FOR EACH PARENT.

* If you think the item is LIKE your parent, mark A.
* If you think the item is SOMEWHAT LIKE your parent, mark B.
* If you think the item is NOT LIKE your parent, mark C.

Thank you very much,

Ronald L. Nuttall

Ronald L. Nuttall, Ph.D.
Project Director

PART A
PLEASE ANSWER THESE WITH REFERENCE TO YOUR FATHER
Use FIRST Answer Sheet

---

1. Makes me feel better after talking over my worries with him.
2. Likes to talk to me and be with me much of the time.
3. Isn't very patient with me.
4. Sees to it that I know exactly where I am and what I am doing.
5. Says I'm very good natured.
6. Wants to know exactly where I am and what I am doing.
7. Decides what friends I can go around with.
8. Soon forgets a rule he has made.
9. Doesn't mind if I kid him about things.
10. Is easy with me.
11. Doesn't talk with me very much.
12. Will not talk to me when I displease him.
13. Seems to see my good points more than my faults.
14. Doesn't let me go places because something might happen to me.
15. Thinks my ideas are silly.
16. Is very strict with me.
17. Tells me I'm good looking.
18. Feels hurt when I don't follow his advice.
19. Is always telling me how I should behave.
20. Usually doesn't find out about my misbehavior.
21. Enjoys it when I bring friends to my home.
22. Worries about how I will turn out, because he takes anything bad I do seriously.
23. Spends very little time with me.
24. Allows me to go out as often as I please.
25. Almost always speaks to me with a warm and friendly voice.
26. Is always thinking of things that will please me.
27. Says I'm a big problem.
28. Believes in having a lot of rules and sticking to them.
29. Tells me how much he loves me.
30. Is always checking on what I've been doing at school or at play.
31. Keeps reminding me about things I am not allowed to do.
32. Punishes me for doing something one day, but ignores it the next.
33. Allows me to tell him if I think my ideas are better than his.
34. Lets me off easy when I do something wrong.
35. Almost never brings me a surprise or present.
36. Sometimes when he disapproves, doesn't say anything but is cold and distant for awhile.
37. Understands my problems and my worries.
38. Seems to regret that I am growing up and am spending more time away from home.
39. Forgets to help me when I need it.
40. Sticks to a rule instead of allowing a lot of exceptions.
41. Likes to talk about what he has read with me.
42. Thinks I'm not grateful when I don't obey.
43. Tells me exactly how to do my work.
44. Doesn't pay much attention to my misbehavior.
45. Likes me to choose my own way to do things.
46. If I break a promise, doesn't trust me again for a long time.
47. Doesn't seem to think of me very often.
48. Doesn't tell me what time to be home when I go out.

NIH-71 (Formerly PHS-4092)
Rev. 1-64

DIRECTIONS:

- * If you think the item is LIKE your parent, mark A.
- * If you think the item is SOMEWHAT LIKE your parent, mark B.
- * If you think the item is NOT LIKE your parent, mark C.

Form for Father PART A (Continued)

49. Enjoys talking things over with me.
50. Gives me a lot of care and attention.
51. Sometimes wishes he didn't have any children.
52. Believes that all my bad behavior should be punished in some way.
53. Hugs and kisses me often.
54. Asks me to tell everything that happens when I'm away from home.
55. Doesn't forget very quickly the things I do wrong.
56. Sometimes allows me to do things that he says are wrong.
57. Wants me to tell him about it if I don't like the way he treats me.
58. Can't say no to anything I want.
59. Thinks I am just someone to "put up with."
60. Speaks to me in a cold, matter-of-fact voice when I offend him.
61. Enjoys going on drives, trips or visits with me.
62. Worries about me when I'm away.
63. Forgets to get me things I need.
64. Gives hard punishments.
65. Believes in showing his love for me.
66. Feels hurt by the things I do.
67. Tells me how to spend my free time.
68. Doesn't insist that I do my homework.
69. Lets me help to decide how to do things we're working on.
70. Says some day I'll be punished for my bad behavior.
71. Doesn't seem to enjoy doing things with me.
72. Gives me as much freedom as I want.
73. Smiles at me very often.
74. Often gives up something to get something for me.
75. Is always getting after me.
76. Sees to it that I'm on time coming home from school or for meals.
77. Tries to treat me as an equal.
78. Keeps a careful check on me to make sure I have the right kind of friends.
79. Keeps after me about finishing my work.
80. Depends upon his mood whether a rule is enforced or not.
81. Makes me feel free when I'm with him.
82. Excuses my bad conduct.
83. Doesn't show that he loves me.
84. Is less friendly with me if I don't see things his way.
85. Is able to make me feel better when I'm upset.
86. Becomes very involved in my life.
87. Almost always complains about what I do.
88. Punishes me when I don't obey.
89. Always listens to my ideas and opinions.
90. Tells me how much he has suffered for me.
91. Would like to able to tell me what to do all the time.
92. Doesn't check up to see whether I have done what he told me.
93. Asks me what I think about how we should do things.
94. Thinks and talks about my misbehavior long after it's over.
95. Doesn't share many activities with me.
96. Lets me go any place I please without asking.

DIRECTIONS:

* If you think the item is LIKE your parent, mark A.
* If you think the item is SOMEWHAT LIKE your parent, mark B.
* If you think the item is NOT LIKE your parent, mark C.

Form for Father PART A (Continued)

97. Enjoys doing things with me.
98. Makes me feel like the most imprtant person in his life.
99. Gets cross and angry about little things I do.
100. Believes in punishing me to correct and improve my manners.
101. Often has long talks with me about the causes and reasons for things.
102. Wants to know with whom I've been when I've been out.
103. Is unhappy that I'm not better in school than I am.
Only keeps rules when it suits him.
105. Really wants me to tell him just how I feel about things.
106. Lets me stay up late if I keep asking.
107. Almost never goes on Sunday drives or picnics with me.
108. Will avoid looking at me when I've disappointed him.
109. Enjoys working with me in the house or yard.
110. Usually makes me the center of his attention at home.
111. Often blows his top when I bother him.
112. Almost always punishes me in some way when I am bad.
113. Often praises me.
114. Says if I loved him, I'd do what he wants me to do.
115. Gets cross and nervous when I'm noisy around the house.
116. Seldom insists that I do anything.
117. Tries to understand how I see things.
118. Says that some day I'll be sorry that I wasn't better as a child.
119. Complains that I get on his nerves.
120. Lets me dress in any way I please.
121. Comforts me when I'm afraid.
122. Enjoys staying at home with me more than going out with friends.
123. Doesn't work with me.
124. Insists that I must do exactly as I'm told.
125. Encourages me to read.
126. Asks other people what I do away from home.
127. Loses his temper with me when I don't help around the house.
128. Frequently changes the rules I am supposed to follow.
129. Allows me to have friends at my home often.
130. Does not insist I obey if I complain or protest.
131. Hardly notices when I am good at home or at school.
132. If I take someone else's side in an argument, is cold and distant to me.
133. Cheers me up when I am sad.
134. Does not approve of my spending a lot of time away from home.
135. Doesn't get me things unless I ask over and over again.
136. Sees to it that I obey when he tells me something.
137. Tells me where to find out more about things I want to know.
138. Tells me of all the things he has done for me.
139. Wants to control whatever I do.
140. Does not bother to enforce rules.
141. Makes me feel at ease when I'm with him.
142. Thinks that any misbehavior is very serious and will have future consequences.
143. Is always finding fault with me.
144. Allows me to spend my money in any way I like.

DIRECTIONS:

* If you think the item is LIKE your parent, mark A.
* If you think the item is SOMEWHAT LIKE your parent, mark B.
* If you think the item is NOT LIKE your parent, mark C.

145. Often speaks of the good things I do.
146. Makes his whole life center about his children.
147. Doesn't seem to know what I need or want.
148. Sees to it that I keep my clothes neat, clean and in order.
149. Is happy to see me when I come from school or play.
150. Questions me in detail about what my friends and I discuss.
151. Doesn't give my any peace until I do what he says.
152. Insists I follow a rule one day and then forgets about it the next.
153. Gives me the choice of what to do whenever possible.
154. I can talk him out of an order, if I complain.
155. Often makes fun of me.
156. If I've hurt his feelings, stops talking to me until I please him again.
157. Has a good time at home with me.
158. Worries that I can't take care of myself unless he is around.
159. Acts as though I'm in the way.
160. If I do the least little thing I shouldn't, punishes me.
161. Hugged or kissed me good night when I was small.
162. Says if I really cared for him, I would not do things that cause him to worry.
163. Is always trying to change me.
164. Lets me get away without doing work I had been given to do.
165. Is easy to talk to.
166. Says that sooner or later we always pay for bad behavior.
167. Wishes I were a different kind of person.
168. Lets me go out any evening I want.
169. Seems proud of the things I do.
170. Spends almost all of his free time with his children.
171. Tells me to "quit hanging around the house" and go somewhere.
172. I have certain jobs to do and am not allowed to do anything else until they are done.
173. Is very interested in what I am learning at school.
174. Almost always wants to know who phoned or wrote to me and what they said.
175. Doesn't like the way I act at home.
176. Changes his mind to make things easier for himself.
177. Lets me do things that other children my age do.
178. Can be talked into things easily.
179. Often seems glad to get away from me for awhile.
180. When I upset him, won't have anything to do with me until I find a way to make up.
181. Isn't interested in changing me, but likes me as I am.
182. Wishes I would stay at home where he could take care of me.
183. Makes me feel I'm not loved.
184. Has more rules than I can remember, so is often punishing me.
185. Says I make him happy.
186. When I don't do as he wants, says I'm not grateful for all he has done for me.
187. Doesn't let me decide things for myself.
188. Lets me get away with a lot of things.
189. Tries to be a friend rather than a boss.
190. Will talk to me again and again about anything bad I do.
191. Is never interested in meeting or talking with my friends.
192. Lets me do anything I like to do.

END OF FIRST ANSWER SHEET

DIRECTIONS:

* If you think the item is LIKE your parent, mark A.
* If you think the item is SOMEWHAT LIKE your parent, mark B.
* If you think the item is NOT LIKE your parent, mark C.

Children's Report of Parental Behavior Questionnaire
(CRPBI)

Mother's Form

Family Research Project
Institute of Human Sciences
Boston College, Mass. 02167

Dear Student,

The questionnaire that you are about to take will be of great value to you and to people your age all over the United States. The object of this study is to provide you and your generation with information about family life and its effect on children and parents. From the results of this study we hope to be able to tell you who will be making decisions about marriage in the future what life is like in different types of families, such as big and small families, families with a preponderance of girls or of boys, and others.

As you go through the different questionnaires -- some of which you will find interesting and some of which you will not find interesting -- remember that it is this type of information that will help people make important decisions in the future.

On this questionnaire we are interested in learning more about the different experiences individuals have had in their families. We are, therefore, asking you to report your experiences during childhood.

If you are under sixteen and have lived at home up to this time, answer the questions as they describe what happens in your home now. If you left home before the age of sixteen, answer as you would have before you left home. If you are over sixteen and had always lived at home up to that time, answer as you would have around the age of sixteen. If you did not grow up with your real mother or father, but someone took the place of that person in your life, please describe that person.

Follow the directions printed on the answer sheet and enter your name, sex, birthday and grade in the spaces provided on both answer sheets. For PART A answer sheet, mark "A" where "FORM OF THIS TEST IS:..." appears. For PART B answer sheet, mark "B" where "FORM OF THIS TEST IS: ..." appears. When you are told to begin, read question number one on the test and mark your answer to that question in one of the three boxes next to number one.

DO NOT USE BOXES LABELLED "D" OR "E" FOR ANY ANSWER. There are spaces provided for the first 160 questions on the front of the form. Use the spaces provided on the reverse side of the form to complete the questionnaire. The last blank you will use on each form is number 192. When you complete PART A, use a new answer sheet to go on to PART B.

Read each item on the following pages and mark the answer on the answer sheet that most closely describes the way each of your parents acts toward you. BE SURE TO MARK EACH ITEM FOR EACH PARENT.

- * If you think the item is LIKE your parent, mark A.
- * If you think the item is SOMEWHAT LIKE your parent, mark B.
- * If you think the item is NOT LIKE your parent, mark C.

Thank you very much.

Ronald L. Nuttall

Ronald L. Nuttall, Ph.D.
Project Director

PART B

PLEASE ANSWER THESE WITH REFERENCE TO YOUR MOTHER:

Use SECOND Answer Sheet

1. Makes me feel better after talking over my worries with her.
2. Likes to talk to me and be with me much of the time.
3. Isn't very patient wtth me.
4. Sees to it that I know exactly what I may or may not do.
5. Says I'm very good natured.
6. Wants to know exactly where I am and what I am doing.
7. Decides what friends I can go around with.
8. Soon forgets a rule she has made.
9. Doesn't mind if I kid her about things.
10. Is easy with me.
11. Doesn't talk with me very much.
12. Will not talk to me when I displease her.
13. Seems to see my good points more than my faults.
14. Doesn't let me go places because something might happen to me.
15. Thinks my ideas are silly.
16. Is very strict with me.
17. Tells me I'm good looking.
18. Feels hurt when I don't follow her advice.
19. Is always telling me how I should behave.
20. Usually doesn't find out about my misbehavior.
21. Enjoys it when I bring friends to my home.
22. Worries about how I will turn out, because she takes anything bad I do seriously.
23. Spends very lttile time with me.
24. Allows me to go out as often as I please.
25. Almost always speaks to me with a warm and friendly voice.
26. Is always thinking of things that will please me.
27. Says I'm a big problem.
28. Believes in having a lot of rules and sticking to them.
29. Tells me how much she loves me.
30. Is always checking on what I've been doing at school or at play.
31. Keeps reminding me about things I am not allowed to do.
32. Punishes me for doing something one day, but ignores it the next.
33. Allows me to tell her if I think my ideas are better than hers.
34. Lets me off easy when I do something wrong.
35. Almost never brings me a surprise or present.
36. Sometimes when she disapproves, doesn't say anything but is cold and distant for awhile.
37. Understands my problems and my worries.
38. Seems to regret that I am growing up and am spending more time away from home.
39. Forgets to help me when I need it.
40. Sticks to a rule instead of allowing a lot of exceptions.
41. Likes to talk about what she has read with me.
42. Thinks I'm not grateful when I don't obey.
43. Tells me exactly how to do my work.
44. Doesn't pay much attention to my misbehavior.
45. Likes me to choose my own way to do things.
46. If I break a promise, doesn't trust me again for a long time.
47. Doesn't seem to think of me very often.
48. Doesn't tell me what time to be home when I go out.

NIH-71 (Formerly PHS-4092)
Rev. 1-64

DIRECTIONS:

* If you think the item is LIKE your parent, mark A.
* If you think the item is SOMEWHAT LIKE your parent, mark B.
* If you think the item is NOT LIKE your parent, mark C.

PART B Form for Mother (Continued)

49. Enjoys talking things over with me.
50. Gives me a lot of care and attention.
51. Sometimes wishes she didn't have any children.
52. Believes that all my bad behavior should be punished in some way.
53. Hugs and kisses me often.
54. Asks me to tell everything that happens when I'm away from home.
55. Doesn't forget very quickly the things I do wrong.
56. Sometimes allows me to do things that she says are wrong.
57. Wants me to tell her about it if I don't like the way she treats me.
58. Can't say no to anything I want.
59. Thinks I am just someone to "put up with."
60. Speaks to me a cold, matter-of-fact voice when I offend her.
61. Enjoys going on drives, trips or visits with me.
62. Worries about me when I'm away.
63. Forgets to get me things I need.
64. Gives hard punishments.
65. Believes in showing her love for me.
66. Feels hurt by the things I do.
67. Tells me how to spend my free time.
68. Doesn't insist that I do my homework.
69. Lets me help to decide how to do things we're working on.
70. Says some day I'll be punished for my bad behavior.
71. Doesn't seem to enjoy doing things with me.
72. Gives me as much freedom as I want.
73. Smiles at me very often.
74. Often gives up something to get something for me.
75. Is always getting after me.
76. Sees to it that I'm on time coming home from school or for meals.
77. Tries to treat me as an equal.
78. Keeps a careful check on me to make sure I have the right kind of friends.
79. Keeps after me about finishing my work.
80. Depends upon her mood whether a rule is enforced or not.
81. Makes me feel free when I'm with her.
82. Excuses my bad conduct.
83. Doesn't show that she loves me.
84. Is less friendly with me if I don't see things her way.
85. Is able to make me feel better when I am upset.
86. Becomes very involved in my life.
87. Almost always complains about what I do.
88. Punishes me when I don't obey.
89. Always listens to my ideas and opinions.
90. Tells me how much she has suffered for me.
91. Would like to be able to tell me what to do all the time.
92. Doesn't check up to see whether I have done what she told me.
93. Asks me what I think about how we should do things.
94. Thinks and talks about my misbehavior long after it's over.
95. Doesn't share many activities with me.
96. Lets me go any place I please without asking.

DIRECTIONS:

- * If you think the item is LIKE your parent, mark A.
- * If you think the item is SOMEWHAT LIKE your parent, mark B.
- * If you think the item is NOT LIKE your parent, mark C.

PART B Form for Mother (Continued)

97. Enjoys doing things with me.
98. Makes me feel like the most important person in her life.
99. Gets cross and angry about little things I do.
100. Believes in punishing me to correct and improve my manners.
101. Often has long talks with me about the causes and reasons for things.
102. Wants to know with whom I've been when I've been out.
103. Is unhappy that I'm not better in school than I am.
104. Only keeps rules when it suits her.
105. Really wants me to tell her just how I feel about things.
106. Lets me stay up late if I keep asking.
107. Almost never goes on Sunday drives or picnics with me.
108. Will avoid looking at me when I've disappointed her.
109. Enjoys working with me in the house or yard.
110. Usually makes me the center of her attention at home.
111. Often blows her top when I bother her.
112. Almost always punishes me in some way when I am bad.
113. Often praises me.
114. Says if I loved her, I'd do what she wants me to do.
115. Gets cross and nervous when I'm noisy around the house.
116. Seldom insists that I do anything.
117. Tries to understand how I see things.
118. Says that some day I'll be sorry that I wasn't better as a child.
119. Complains that I get on her nerves.
120. Lets me dress in any way I please.
121. Comforts me when I'm afraid.
122. Enjoys staying at home with me more than going out with friends.
123. Doesn't work with me.
124. Insists that I must do exactly as I'm told.
125. Encourages me to read.
126. Asks other people what I do away from home.
127. Loses her temper with me when I don't help around the house.
128. Frequently changes the rules I am supposed to follow.
129. Allows me to have friends at my home often.
130. Does not insist I obey if I complain or protest.
131. Hardly notices when I am good at home or in school.
132. If I take someone else's side in an argument, is cold and distant to me.
133. Cheers me up when I am sad.
134. Does not approve of my spending a lot of time away from home.
135. Doesn't get me things unless I ask over and over again.
136. Sees to that I obey when she tells me something.
137. Tells me where to find out more about things I want to know.
138. Tells me of all the things she has done for me.
139. Wants to control whatever I do.
140. Does not bother to enforce rules.
141. Makes me feel at ease when I'm with her.
142. Thinks that any misbehavior is very serious and will have future consequences.
143. Is always finding fault with me.
144. Allows me to spend my money in any way I like.

DIRECTIONS:

* If you think the item is LIKE your parent, mark A.
* If you think the item is SOMEWHAT LIKE your parent, mark B.
* If you think the item is NOT LIKE your parent, mark C.

145. Often speaks of the good things I do.
146. Makes her whole life center about her children.
147. Doesn't seem to know what I need or want.
148. Sees to it that I keep my clothes neat, clean and in order.
149. Is happy to see me when I come from school or play.
150. Questions me in detail about what my friends and I discuss.
151. Doesn't give me any peace until I do what she says.
152. Insists I follow a rule one day and then forgets about it the next.
153. Gives me the choice of what to do whenever possible.
154. I can talk her out of an order, if I complain.
155. Often makes fun of me.
156. If I've hurt her feelings, stops talking to me until I please her again.
157. Has a good time at home with me.
158. Worries that I can't take care of myself unless she is around.
159. Acts as though I'm in the way.
160. If I do the least little thing that I shouldn't, punishes me.
161. Hugged or kissed me goodnight when I was small.
162. Says if I really cared for her, I would not do things that cause her to worry.
163. Is always trying to change me.
164. Lets me get away without doing work I had been given to do.
165. Is easy to talk to.
166. Says that sooner or later we always pay for bad behavior.
167. Wishes I were a different kind of person.
168. Lets me go out any evening I want.
169. Seems proud of the things I do.
170. Spends almost all of her free time with her children.
171. Tells me to quit "hanging around the house" and go somewhere.
172. I have certain jobs to do and am not allowed to do anything else until they are done.
173. Is very interested in what I am learning at school.
174. Almost always wants to know who phoned me or wrote to me and what they said.
175. Doesn't like the way I act at home.
176. Changes her mind to make things easier for herself.
177. Lets me do things that other children my age do.
178. Can be talked into things easily.
179. Often seems glad to get away from me for a while.
180. When I upset her, won't have anything to do with me until I find a way to make up.
181. Isn't interested in changing me, but likes me as I am.
182. Wishes I would stay at home where she could take care of me.
183. Makes me feel I'm not loved.
184. Has more rules than I can remember, so is often punishing me.
185. Says I make her happy.
186. When I don't do as she wants, says I'm not grateful for all she has done for me.
187. Doesn't let me decide things for myself.
188. Lets me get away withaa lot of things.
189. Tries to be a friend rather than a boss.
190. Will talk to me again and again about anything bad I do.
191. Is never interested in meeting or talking with my friends.
192. Lets me do anything I like to do.

END OF SECOND ANSWER SHEET.

DIRECTIONS:

- * If you think the item is LIKE your parent, mark A.
- * If you think the item is SOMEWHAT LIKE your parent, mark B.
- * If you think the item is NOT LIKE your parent, mark C.

SCALE NAME: Intellectual Achievement Responsibility Questionnaire

AUTHORS: Crandall, Katkovsky and Crandall

COPYRIGHT: None

VARIABLE: The scale measures internal versus external control orientation.

DESCRIPTION: The IAR questionnaire measures the child's beliefs on whether he is responsible for his progress or whether external factors beyond his control affect his progress. The scale is composed of thirty-four forced-choice items. Each item describes either a positive or a negative achievement experience that routinely occurs in children's lives. This item is followed by one alternative stating that the event was caused by the child and another stating that the event occurred because of the behavior of someone else in the child's immediate environment. A child's I+ score is obtained by summing all positive events for which he assumes credit, and his I- score is a total of all negative events for which he assumes blame. The total I score is the sum of the I+ and I- subscores. (Taken from O. G. Johnson and J. W. Bommarito. Tests and Measurements in Child Development: A Handbook. p. 299-300.)

BASIC REFERENCE: Crandall, Virginia C., Katkovsky, W. and Crandall, V. J. Children's Beliefs in Their Own Control of Reinforcements in Intellectual-Academic Achievement Situations. Child Development, 1965, pp.36, 91-109.

INTELLECTUAL ACHIEVEMENT RESPONSIBILITY QUESTIONNAIRE

FAMILY RESEARCH PROJECT
INSTITUTE OF HUMAN SCIENCES
BOSTON COLLEGE
CHESTNUT HILL, MASS. 02167

IAR QUESTIONNAIRE

Dear Student,

The questionnaire that you are about to take will be of great value to you and to people your age all over the United States. The object of this study is to provide you and your generation with information about families and their life styles. From the results of this study we hope to be able to tell you who will be making decisions about marriage in the future what different families do for recreation, who makes what decisions, how husbands and wives divide up their jobs, and many other aspects of family life.

This questionnaire asks for some information about your daily life. It should take you no longer than fifteen minutes to complete. There is, however, no time limit. Please answer all questions completely, in pencil, on the separate answer sheet provided. You may find that some questions seem repetitious; however, please answer them all.

Please follow the directions printed on the answer sheet and enter your name, sex, birthday and grade in the spaces provided.

This questionnaire describes a number of common experiences that most of you have in your daily lives. These statements are presented one at a time, and each statement is followed by two possible answers. Read the description of the experience carefully, and then look at the two answers. Choose the one that describes what most often happens to you. Mark "A" or "B" on your answer sheet. On some questions, if you find it hard to choose, be sure to answer according to how you really feel.

Thank you,

Ronald L. Nuttall

Ronald L. Nuttall, Ph.D.
Project Director

1. If a teacher passes you to the next grade, would it probably be
   A. because she liked you, or
   B. because of the work you did?

2. When you do well on a test at school, is it more likely to be
   A. because you studied for it, or
   B. because the test was especially easy?

3. When you have trouble understanding something in school, is it usually
   A. because the teacher didn't explain it clearly, or
   B. because you didn't listen carefully?

4. When you read a story and can't remember much of it, is it usually
   A. because the story wasn't well written, or
   B. because you weren't interested in the story?

5. Suppose your parents say you are doing well in school. Is this likely to happen
   A. because your school work is good, or
   B. because they are in a good mood?

6. Suppose you did better than usual in a subject at school. Would it probably happen
   A. because you tried harder, or
   B. because someone helped you?

7. When you lose at a game of cards or checkers, does it usually happen
   A. because the other player is good at the game, or
   B. because you don't play well?

8. Suppose a person doesn't think you are very bright or clever.
   A. Can you make him change his mind if you try to, or
   B. Are there some people who will think you're not very bright no matter what you do?

9. If you solve a puzzle quickly, is it
   A. because it wasn't a very hard puzzle, or
   B. because you worked on it carefully?

10. If a boy or girl tells you that you are dumb, is it more likely that they say that
    A. because they are mad at you, or
    B. because what you did really wasn't very bright?

11. Suppose you study to become a teacher, scientist, or doctor, and you fail. Do you think this would happen
    A. because you didn't work hard enough, or
    B. because you needed some help, and other people didn't give it to you?

12. When you learn something quickly in school, is it usually
    A. because you paid close attention, or
    B. because the teacher explained it clearly?

13. If a teacher says to you, "Your work is fine," is it
    A. something teachers usually say to encourage pupils, or
    B. because you did a good job?

14. When you find it hard to work arithmetic or math problems at school, is it
    A. because you didn't study well enough before you tried them, or
    B. because the teacher gave problems that were too hard?

15. When you forget something you heard in class, is it
    A. because the teacher didn't explain it very well, or
    B. because you didn't try very hard to remember?

16. Suppose you weren't too sure about the answer to a question the teacher asked you, but your answer turned out to be right. Is it
    A. because she wasn't as particular as usual, or
    B. because you gave the best answer you could think of?

17. When you read a story and remember most of it, is it usually
    A. because you were interested in the story, or
    B. because the story was well written?

18. If your parents tell you you're acting silly and not thinking clearly, is it more likely to be
    A. because of something you did, or
    B. because they happen to feel cranky?

19. When you don't do well on a test at school, is it
    A. because the test was especially hard, or
    B. because you didn't study for it?

20. When you win at a game of cards or checkers, does it happen
    A. because you play really well, or
    B. because the other person doesn't play well?

21. If people think you're bright or clever, is it
    A. because they happen to like you, or
    B. because you usually act that way?

22. If a teacher didn't pass you to the next grade, would it probably be
    A. because she "had it in for you," or
    B. because your school work wasn't good enough?

23. Suppose you don't do as well as usual in a subject at school. Would this probably happen
    A. because you weren't as careful as usual, or
    B. because somebody bothered you and kept you from working?

24. If a boy or girl tells you that you are bright, is it usually
    A. because you thought up a good idea, or
    B. because they like you?

25. Suppose you become a famous teacher, scientist or doctor. Do you think this would happen
    - A. because other people helped you when you needed it, or
    - B. because you worked very hard?

26. Suppose your parents say you aren't doing well in your school work. Is this likely to happen more
    - A. because your work isn't very good, or
    - B. because they are feeling cranky?

27. Suppose you are showing a friend how to play a game and he has trouble with it. Would that happen
    - A. because he wasn't able to understand how to play, or
    - B. because you couldn't explain it well?

28. When you find it easy to work arithmetic or math problems at school, is it
    - A. because the teacher gave you especially easy problems, or
    - B. because you studied your book well before you tried them?

29. When you remember something you heard in class, is it usually
    - A. because you tried hard to remember, or
    - B. because the teacher explained it well?

30. If you can't work a puzzle, is it more likely to happen
    - A. because you are not especially good at working puzzles, or
    - B. because the instructions weren't written clearly enough?

31. If your parents tell you that you are bright or clever, is it more likely
    - A. because they are feeling good, or
    - B. because of something you did?

32. Suppose you are explaining how to play a game to a friend and he learns quickly. Would that happen more often
    - A. because you explained it well, or
    - B. because he was able to understand it?

33. Suppose you're not sure about the answer to a question your teacher asks you and the answer you give turns out to be wrong. Is it likely to happen
    - A. because she was more particular than usual, or
    - B. because you answered too quickly?

34. If a teacher says to you, "Try to do better," would it be
    - A. because this is something she might say to get pupils to try harder, or
    - B. because your work wasn't as good as usual?

THANK YOU FOR YOUR COOPERATION.

SCALE NAME: Children's Social Desirability Scale

AUTHORS: Crandall, Crandall, and Katkovsky

VARIABLE: The scale measures social desirability in children.

DESCRIPTION: Social desirability is the tendency to give socially desirable responses. The test, consisting of forty-eight true-false items, measures this response by asking questions to determine if the child behaves according to approved middle-class mores, if he ever behaves in a deviating fashion, or if he sometimes thinks or acts in an acceptable manner. The scale is administered in various manners contingent upon the age level of the child. It contains a built-in safeguard against the possibility of acquiescence. (Taken from O. G. Johnson and J. W. Bommarito. *Tests and Measurements in Child Development: A Handbook*. p. 188.

BASIC REFERENCE: Crandall, V. C., Crandall, V. J., and Katkovsky, W. "A Children's Social Desirability Questionnaire." *Journal of Consulting Psychology*, 1965, 29, 27-36.

Children's Social Desirability Questionnaire

FAMILY RESEARCH PROJECT
INSTITUTE OF HUMAN SCIENCES
BOSTON COLLEGE
CHESTNUT HILL, MASS. 02167

PERSONAL EXPERIENCES

Dear Student,

The questionnaire that you are about to take will be of great value to you and to people your age all over the United States. The object of this study is to provide you and your generation with information about families and their life styles. From the results of this study we hope to be able to tell you who will be making decisions about marriage in the future what different families do for recreation, who makes what decisions, how husbands and wives divide up their jobs, and many other aspects of family life.

This questionnaire asks for some information about your personal experiences. It should take you no longer than ten minutes to complete. There is, however, no time limit. Please answer all questions completely, in pencil, on the separate answer sheet provided. Please follow the directions printed on the answer sheet and enter your name, sex, birthday and grade in the spaces provided.

This questionnaire lists a number of experiences that most children have at one time or another. Read each statement carefully; then decide whether it does or does not fit you. If it does, make a mark in column "A" for "TRUE;" and if it doesn't fit you, mark column "B" for "FALSE." Ignore the columns marked C, D and E on your answer sheet.

If you have any questions at any time, raise your hand and one of the persons who passed out these questionnaires will come and explain it to you.

Thank you,

Ronald L. Nuttall

Ronald L. Nuttall, Ph.D.
Project Director

Contract No. NIH 70-2195
OMB Clearance No. NIH 68-s72042
. Expiration Date: 31 May 1973

1. I always enjoy myself at a party.
2. I tell a little lie sometimes.
3. I never get angry if I have to stop in the middle of something I'm doing to eat dinner, or go to school.
4. Sometimes I don't like to share my things with my friends.
5. I am always respectful of older people.
6. I would never hit a boy or girl who was smaller than me.
7. Sometimes I do not feel like doing what my teachers want me to do.
8. I never act "fresh" or "talk back" to my mother and father.
9. When I make a mistake, I always admit that I am wrong.
10. I feel my parents do not always show good judgment.
11. I have never felt like saying unkind things to a person.
12. I always finish all of my homework on time.
13. Sometimes I have felt like throwing or breaking things.
14. I never let someone else get blamed for what I did wrong.
15. Sometimes I say something just to impress my friends.
16. I am always careful about keeping my clothing neat, and my room picked up.
17. I never shout when I feel angry.
18. Sometimes I feel like staying home from school even if I am not sick.
19. Sometimes I wish that my parents didn't check up on me so closely.
20. I always help people who need help.
21. Sometimes I argue with my mother to do something she doesn't want me to do.
22. I never say anything that would make a person feel bad.
23. My teachers always know more about everything than I do.
24. I am always polite, even to people who are not very nice.
25. Sometimes I do things I've been told not to do.
26. I never get angry.

27. I sometimes want to own things just because my friends have them.

28. I always listen to my parents.

29. I never forget to say "please" and "thank you."

30. Sometimes I wish I could just "mess around" instead of having to go to school.

31. I always wash my hands before every meal.

32. Sometimes I dislike helping my parents even though I know they need my help around the house.

33. I never find it hard to make friends.

34. I have never been tempted to break a rule or a law.

35. Sometimes I try to get even when someone does something to me I don't like.

36. I somethimes feel angry when I don't get my way.

37. I always help an injured animal.

38. Sometimes I want to do things my parents think I am too young to do.

39. I sometimes feel like making fun of other people.

40. I have never borrowed anything without asking permission first.

41. Sometimes I get annoyed when someone disturbs something I've been working on.

42. I am always glad to cooperate with others.

43. I never get annoyed when my best friend wants to do something I don't want to do.

44. Sometimes I wish that the other kids would pay more attention to what I say.

45. I always do the right things.

46. Sometimes I don't like to obey my parents.

47. Sometimes I don't like it when another person asks me to do things for him.

48. Sometimes I get mad when people don't do what I want.

THANK YOU FOR YOUR COOPERATION.

SCALE NAME: Test Anxiety Scale for Children

AUTHOR: Seymour Sarason

COPYRIGHT: None

VARIABLE: The scale measures children's anxiety in a test situation.

DESCRIPTION: The test is composed of thirty direct questions about feelings of anxiety to which the child circles either "yes" or "no". The questions contain elements of anticipation of dangerous or painful consequences, include a variety of test-like situations and some questions involving bodily reactions to test situations. A Lie Scale was devised to compensate for any "faking". A high Lie Score reflects consistent responses of "no" to Lie Scale items in which it is almost impossible to experience no anxiety.

BASIC REFERENCE: Sarason, S. B., Hill, K. T. and Zimbardo, P. G. A Longitudinal Study of the Relation of Test Anxiety to Performance on Intelligence and Achievement Tests. Monographs of the Society for Research in Child Development, 1964, 29(7, Whole No. 98).

Test Anxiety Questionnaire

(Short High School Form)

Family Research Project
Institute of Human Sciences
Boston College
Chestnut Hill, Mass. 02167

ATTITUDES TOWARD DIFFERENT TESTING SITUATIONS

Dear Student,

The questionnaire that you are about to take will be of great value to you and to people your age all over the United States. The object of this study is to provide you and your generation with information about families and their life styles. From the results of this study we hope to be able to tell *you* who will be making decisions about marriage in the future what different families do for recreation, who makes what decisions, how husbands and wives divide up their jobs, and many other aspects of family life.

Many people have been interested in how students *feel* about tests and about taking tests. This questionnaire is designed to let you tell us how *you* feel about them. We know that different people may have different ideas and attitudes about the same thing. We are particularly interested in how people differ in their feelings about tests.

By scholastic aptitude tests we mean the tests that all of you have probably taken at some time while in school. These are usually tests for which you *cannot prepare* and for which you *cannot study*. By teacher-made tests we mean the tests given to you during the term which your teacher *announces in advance*. These are the tests covering material you have had in class, tests for which you *can prepare*. If we just say "tests," we mean all kinds of tests.

Answer the questions quickly. Do not spend too much time on any one question. You will have time to complete the questionnaire. Raise your hand if you have any questions, and we will try to answer them. ANSWER THE QUESTIONS *AS YOU FEEL*. It should take you no longer than fifteen minutes to complete. There is, however, no time limit. Please answer all questions completely, in pencil, on the separate answer sheet provided. Please follow the directions printed on the answer sheet and enter your name, sex, birthday and grade in the spaces provided.

Below are a list of attitude statements. Please indicate the extent to which you agree with each statement by marking your answer sheet according the the number of the answer category which most closely fits your extent of agreement in the space next to the statement. You may find that some questions are repetitious. However, try to answer them all.

Thank you,

Ronald L. Nuttall

Ronald L. Nuttall, Ph.D.
Project Director

The answer categories are as follows:

1 = Strongly Agree
2 = Agree
3 = Not Sure
4 = Disagree
5 = Strongly Disagree

---

1. Before taking a scholastic aptitude test, I feel fairly confident that I will do well.
2. Before taking a scholastic aptitude test, I am aware of an uneasy feeling.
3. While taking a scholastic aptitude test, I am aware that my heart is beating faster.
4. I find myself thinking about other things while taking a test.
5. Before taking a scholastic aptitude test, I tend to worry.
6. While taking a scholastic aptitude test, I do not perspire more than I do at other times in school.
7. Before taking a teacher-made test, I feel fairly confident that I will do well.
8. I usually expect to do poorly on a teacher-made test.
9. After I have completed a scholastic aptitude test, I worry about how well I have done.
10. After taking a teacher-made test, I feel fairly confident that I have done well.
11. While I am taking a test, I find that I cannot seem to sit still.
12. When the teacher announces that a test is going to be given, I become afraid that I am going to fail -- that I will do poorly.
13. While taking a hard test, I find that I tend to forget facts that I thought I knew very well.
14. Before taking a test, I worry about the possibility of failing it.
15. While taking a scholastic aptitude test, I wonder about how well I am doing.
16. Before taking a teacher-made test, I am aware of an uneasy feeling.
17. While taking a teacher-made test, I am aware that my heart is beating faster.
18. While taking a scholastic aptitude test, I worry about the possibility of failing it.

The answer categories are as follows:

1 = Strongly Agree
2 = Agree
3 = Not Sure
4 = Disagree
5 = Strongly Disagree

---

19. Before taking a teacher-made test, I tend to worry.

20. I expect myself to do better with difficult problems given as homework than with the same problems given on a course test.

21. After I have completed a teacher-made test, I worry about how well I have done.

22. Before I begin to answer the questions on a teacher-made test, I am aware that my heart is beating faster.

23. After taking a teacher-made test, I do not feel very confident that I have done my best.

24. While taking a teacher-made test, I find it difficult to concentrate on the questions because I am concerned with how well I am doing.

25. I feel that course test result (score) shows what I really know in the subject.

26. While taking a teacher-made test, I find myself thinking about how well I am doing on it.

27. While taking a teacher-made test, I worry about the possibility of failing it.

28. Sometimes while taking a test, my mind goes blank.

29. Before I begin a scholastic aptitude test, I often feel that I cannot do well.

30. Even though I prepare for a course examination, I expect to do poorly on it.

31. While taking a teacher-made test, I wonder about how well I am doing.

32. I usually expect to do poorly on a course test.

THANK YOU FOR YOUR COOPERATION

SCALE NAME: Dogmatism Scale and F Scale

AUTHORS: Kerlinger and Rokeach

COPYRIGHT: None

VARIABLE: The scales measure dogmatism and authoritarianism.

DESCRIPTION: This version of the test uses items which were significantly loaded on one of ten factors extracted from the original scales. Some dimensions of the dogmatism scale, which measures the openness or closedness of belief systems, include: Belief in One Cause, Belief in One Truth, Isolation-Alienation, Self-Proselytization. Some factors retained from the original tests for this version of the F Scale include Authoritarian Aggression, Projectivity and Superstition, Impulse Control. Virtuous Self-Denial and Submission to Ingroup Authorities were a mixture of F and Dogmatism items.

BASIC REFERENCE: Kerlinger and Rokeach, "The Factorial Nature of the F and D Scales," Journal of Personality and Social Psychology, 1966, Vol. 4, No. 4, 391-399.

FAMILY RESEARCH PROJECT
INSTITUTE OF HUMAN SCIENCES
BOSTON COLLEGE
CHESTNUT HILL, MASS. 02167

PERSONAL PHILOSOPHY

QUESTIONNAIRE

Dear Student,

The questionnaire that you are about to take will be of great value to you and to people your age all over the United States. The object of this study is to provide you and your generation with information about families and their life styles. From the results of this study we hope to able to tell you who will be making decisions about marriage in the future what different families do for recreation, who makes what decisions, how husbands and wives divide up their jobs, and many other aspects of family life.

This questionnaire is intended to determine some aspects of your personal philosophy. It should take you no longer than fifteen minutes to complete. There is, however, no time limit. Please answer all questions completely, in pencil, on the separate answer sheet provided. Please follow the directions printed on the answer sheet and enter your name, sex, birthday and grade in the spaces provided.

This questionnaire is a list of opinion and attitude statements. Would you indicate the extent to which you agree with each statement by marking your answer sheet according to the number of the answer category which most closely fits your extent of agreement in the space next to the statements.

The answer categories are as follows:

1 = Strongly Agree
2 - Agree
3 = ?
4 = Disagree
5 = Strongly Disagree

Thank you,

Ronald L. Nuttall

Ronald L. Nuttall, Ph.D.
Project Director

The answer categories are as follows:

1 = Strongly Agree
2 = Agree
3 = ?
4 = Disagree
5 = Strongly Disagree

Below are a list of opinion and attitude statements. Would you indicate the extent to which you agree with each statement by marking your answer sheet according to the number of the answer category which most closely fits your extent of agreement in the space next to the statement.

1. Human nature being what it is, there will always be war and conflict.
2. Some day it will probably be shown that astrology can explain a lot of things.
3. Sex crimes, such as rape and attacks on children, deserve more than mere imprisonment; such criminals ought to be publicly whipped, or worse.
4. Homosexuals are hardly better than criminals and ought to be severely punished.
5. It is essential for learning or effective work that our teachers or bosses outline in detail what is to be done and exactly how to go about it.
6. Nobody ever learned anything really important except through suffering.
7. There is hardly anything lower than a person who does not feel a great love, gratitude and respect for his parents.
8. Obedience and respect for authority are the two most important virtues children should learn.
9. Most of our social problems would be solved if we could somehow get rid of the immoral, crooked, and feeble-minded people.
10. An insult to our honor should always be punished.
11. If people would talk less and work more, everybody would be better off.
12. What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.
13. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
14. No weakness or difficulty can hold us back, if we have enough will-power.
15. No sane, normal, decent person could ever think of hurting a close friend or relative.

The answer categories are as follows:

1 = Strongly Agree
2 - Agree
3 = ?
4 = Disagree
5 = Strongly Disagree

Below are a list of opinion and attitude statements. Would you indicate the extent to which you agree with each statement by marking your answer sheet according to the number of the answer category which most closely fits your extent of agreement in the space next to the statement.

---

16. Nowadays when so many different kinds of people move around and mix together so much, a person has to protect himself especially carefully against catching an infection or disease from them.

17. Most people don't realize how much our lives are controlled by plots hatched in secret places.

18. A man who does not believe in some great cause has not really lived.

19. Most people just don't know what's good for them.

20. Fundamentally, the world we live in is a pretty lonesome place.

21. When it comes to difference of opinion on religion we must be careful not to compromise with those who believe differently from the way we do.

22. In times like these, a person must be pretty selfish if he considers primarily his own happiness.

23. If given the chance, I would do something of great benefit to the world.

24. The United States and Russia have just about nothing in common.

25. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.

26. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.

27. A person who thinks primarily of his own happiness is beneath contempt.

28. It is better to be a dead hero than a live coward.

29. Most people just don't give a "damn" for others.

30. It is only natural that a person should have a much better acquaintance with ideas he believes in than with ideas he opposes.

31. I'd like it if I could find someone who would tell me how to solve my personal problems.

The answer categories are as follows:

1 = Strongly Agree	4 = Disagree
2 = Agree	5 = Strongly Disagree
3 = ?	

Below are a list of opinion and attitude statements. Would you indicate the extent to which you agree with each statement by marking your answer sheet according to the number of the answer category which most closely fits your extent of agreement in the space next to the statement.

---

32. In this complicated world of ours the only way we can know what is going on is to rely on leaders or experts who can be trusted.

33. The present is all too often full of unhappiness. It is only the future that counts.

34. The worst crime a person could commit is to attack publicly the people who believe in the same thing he does.

35. In a heated discussion I generally become so absorbed in what I am going to say that I forget to listen to what the others are saying.

36. Of all the different philosophies which exist in this world there is probably only one that is correct.

37. The main thing in life is for a person to want to do something important.

38. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

THANK YOU FOR YOUR COOPERATION .

SCALE NAME: The High School Personality Questionnaire

AUTHOR: Cattell and Cattell

COPYRIGHT: None

VARIABLE: The scale is designed to measure the child's personality.

DESCRIPTION: The instrument used in this study to measure the child's personality was Cattell and Cattell's (1968) High School Personality Questionnaire (HSPQ) Form A. This instrument consists of 142 items, all of which are multiple choice with three alternatives. There are Fourteen scales, each composed of ten items. Thirteen of the scales are measures of personality traits and one, Factor B, measures intelligence. For the thirteen personality scales a selection of the alternative that has more of the trait received a score of two. Likewise the selection of the alternative that has less of the trait received a score of 1 and none of the trait was scored 0. To get a total score for a trait, the number of points a person received on each of the ten items was added up. Thus for these thirteen personality traits the score a person could receive ranged from 0 to 20.

For Factor B, Intelligence, the scoring system was somewhat different. Each of the ten items making up this factor has one correct answer which is scored as one and two incorrect answers which are recorded as zero. The ten item scores are accumulated. The score a person gets on Factor B ranges from zero to ten.

BASIC REFERENCE: Manual for the Jr.-Sr. High School Personality Questionnaire "HSPQ", Institute for Personality and Ability Testing, 1602-04 Cononado Drive, Champaign, Illinois, 1968.

SCALE NAME: Test of Effective Academic Motivation

AUTHOR: Gene Marshall Smith

COPYRIGHT: in process

VARIABLE: The test measures personality characteristics meeded for effective academic motivation.

DESCRIPTION: The version used in the study consisted of 300 statements concerning a person's feelings, beliefs and behavior that are related to effective academic motivation. The student has to mark one of the following choices: T = true, ?T = mostly true...but not completely true, ?F = mostly false...but not completely false, and F = false.

BASIC REFERENCE: A monograph explaining in detail the nature of this measure is being prepared at present by Dr. Gene M. Smith, Department of Anesthesia, Harvard Medical School, Massachusetts General Hospital, Boston, Mass.

Appendix E

The family size variable ranged from "one" to "ten or more" and was based on a question asked the student, checked with other questions on number of older and younger brothers and sisters. This question asked the student to include among the children half-brothers and half-sisters and children not living at home as well as those living at home. The question is given below:

What is the total number of living children in your family? Include yourself, together with all full brothers and sisters, half-brothers and sisters, stepbrothers and sisters, and foster brothers and sisters. Include those that are not living in your home.

____ (1) One
____ (2) Two
____ (3) Three
____ (4) Four
____ (5) Five
____ (6) Six
____ (7) Seven
____ (8) Eight
____ (9) Nine
____ (10) Ten or more

The mean "family size" of the total population of 3595 was 5.02 with a standard deviation of 2.61

Father's Socioeconomic Status is a mean of two z scored variables, father's education and father's occupational status. Both of these variables were coded so that a high score represents highest attainment and a low score (negative) represents lowest attainment. For example, the highest possible score for father's SES would be assigned to a family in which the father had a doctorate and was employed as a professional.

The two questions upon which the z scores were based are:

Please mark the one answer indicating the highest level of education your father reached. Mark the one best answer even if you are not sure.

____ (1) None
____ (2) 1-3 grade
____ (3) 4-6 grade
____ (4) 7-8 grade
____ (5) 9th grade
____ (6) 10th grade
____ (7) 11th grade
____ (8) Graduated from high school
____ (9) Vocational or business school after high school
____ (10) Some junior or regular college, but did not graduate
____ (11) Graduate from a regular 4-year college
____ (12) Master's degree
____ (13) Some work toward doctorate or professional degree
____ (14) Completed doctorate or professional degree
____ (15) I don't know*

---

* "I don't know" was coded as missing data

Appendix E (Continued)

Which one of the following comes closest to describing the work of your father (or the male head of your household)?

Mark only one answer. If he works on more than one job, mark the one on which he spends most of his time.

____ (1) Not applicable
____ (2) Large farm or ranch owner or manager
____ (3) Small farm or ranch owner or manager
____ (4) Farm or ranch foreman
____ (5) Farm or ranch worker
____ (6) Workman or laborer - such as factory or mine worker, fisherman, filling station attendant, long-shoreman, etc.
____ (7) Private household worker - such as a servant, butler, etc.
____ (8) Protective worker - such as a policeman, detective, sheriff, fireman
____ (9) Service worker - such as barber, beautician, waiter, etc.
___ (10) Semi-skilled worker - such as factory machine operator, bus or cab driver, meat cutter, etc.
___ (11) Skilled worker or foreman - such as a baker, carpenter, electrician, enlisted man in the armed forces, mechanic, plumber, plasterer, tailor, foreman in a factory or mine (but not on a farm), etc.
___ (12) Clerical worker - such as bank teller, bookkeeper, sales clerk, office clerk, mail carrier, messenger, etc.
___ (13) Salesman - such as real estate or insurance salesman, factory representative, etc.
___ (14) Manager - such as sales manager, store manager, office manager, business manager, factory supervisor, etc.
___ (15) Official - such as manufacturer, officer in a large company, banker, government official or inspector, etc.
___ (16) Proprietor or owner - such as owner of a small business, wholesaler, retailer, contractor, restaurant owner, etc.
___ (17) Professional - such as school teacher, actor, accountant, artist, clergyman, dentist, engineer, lawyer, librarian, scientist, etc.
___ (18) Technical - such as draftsman, surveyor, medical or dental technician, etc.

Father's occupational status was recoded into the following categories:

1. Large Farm, Official, Professional
e.g. Large farm or ranch owner or manager
Official - such as manufacturer, officer in a large company, banker, government official or inspector, etc.
Professional - such as school teacher, actor, accountant, artist, clergyman, dentist, engineer, lawyer, librarian, scientist, etc.

Appendix E (Continued)

2. Manager, Proprietor, Technical
   e.g. Manager - such as sales manager, store manager, office manager, business manager, factory supervisor, etc.
   Proprietor or owner - such as owner of a small business, wholesaler, retailer, contractor, restaurant owner, etc.
   Technical - such as draftsman, surveyor, medical or dental technician, etc.

3. Clerical and Sales Worker
   e.g. Clerical worker - such as bank teller, bookkeeper, sales clerk, office clerk, mail carrier, messenger, etc.
   Salesman - such as real estate or insurance salesman, factory representative, etc.

4. Protective, Service, Skilled Workers
   e.g. Protective worker - such as policeman, detective, sheriff, fireman
   Service worker - such as barber, beautician, waiter, etc.
   Skilled worker or foreman - such as a baker, carpenter, electrician, enlisted man in the armed forces, mechanic, plumber, plasterer, tailor, foreman in a factory or mine (but not on a farm), etc.

5. Farm and Semi-skilled Worker
   e.g. Small farm or ranch owner or manager
   Farm or ranch foreman
   Semi-skilled worker - such as factory machine operator, bus or cab driver, meat cutter, etc.

6. Farm Worker, Workman, Household Worker
   e.g. Farm or ranch worker
   Workman or laborer - such as factory or mine worker, fisherman, filling station attendant, longshoreman, etc.
   Private household worker - such as a servant, butler, etc.

7. Unskilled

This recoded variable was recoded directionally so that the highest prestige had the highest numerical value. A z-score was then computed, for each variable. For father's occupational status, the mean was 3.42, the standard deviation 1.62. The mean of these two z scores yielded the variable "Father's Socio-economic Status."

For the total sample of 3477, the mean father's socio-economic status was -0.0117, the standard deviation was 0.8940

Appendix E (Continued)

Mother's socioeconomic status is the mean of the two z scored variables, mother's education and mother's occupational status. If the mother had no occupation other than housewife however, her SES represents her education only. As with family SES and father's SES a high score represents high SES.

The two questions upon which the z scores were based are:

Mark the one answer indicating the highest level of education your mother reached. Mark the one best answer even if you are not sure.

____ (1) None
____ (2) 1-3 grade
____ (3) 4-6 grade
____ (4) 7-8 grade
____ (5) 9th grade
____ (6) 10th grade
____ (7) 11th grade
____ (8) Graduated from high school
____ (9) Vocational or business school after high school
___ (10) Some junior or regular college, but did not graduate
___ (11) Graduated from a regular 4-year college
___ (12) Master's degree
___ (13) Some work toward doctorate or professional degree
___ (14) Completed doctorate or professional degree
___ (15) I don't know*

Which one of the following comes closest to describing the work of your mother (or the female head of your household)?

Mark only one answer. If she does housework in addition to outside work, count only the outside work. If she works on more than one job, mark the most important one.

____ (0) Not applicable
____ (1) Housewife only; she did not work for pay during my childhood.
____ (2) Large farm or ranch owner or manager
____ (3) Small farm or ranch owner and/or manager
____ (4) Farm or ranch worker
____ (5) Worker or laborer - such as charwoman, laundry worker, etc.
____ (6) Private household worker - such as housekeeper, maid, laundress, etc.

---

* "I don't know" was coded as missing.

Appendix E (Continued)

____ (7) Protective worker - such as policewoman, etc.
____ (8) Service worker - such as beautician, waitress, etc.
____ (9) Semi-skilled worker - such as factory machine operator, cab driver, etc.
___ (10) Skilled worker or forewoman - such as baker, inspector, etc.
___ (11) Clerical worker - such as bookkeeper, secretary, typist, sales clerk, store clerk, etc.
___ (12) Sales - such as real estate, life insurance, etc.
___ (13) Manager - such as sales manager, store manager, office manager, business manager, factory supervisor, etc.
___ (14) Official - such as manufacturer, officer in a large company, banker, government official or inspector, etc.
___ (15) Proprietor or owner - such as owner of a small store or business, wholesaler, retailer restaurant owner, etc.
___ (16) Professional - such as school teacher, actress, accountant, artist, dentist, physician, engineer, lawyer, librarian, scientist, etc.
___ (17) Technical - such as draftsman, medical or dental technician, etc.

Mother's occupation was recoded into the same categories and direction as was father's occupation. If the mother was a housewife, the category "not applicable" was used. A z score was then computed for each variable. For mother's education the mean was 5.38, the standard deviation 3.08. For mother's occupational status, the mean was 3.61, the standard deviation 1.72. The mean of these two z scores yielded the variable "Mother's Socio-economic Status."

For the total sample of 3368, the mean mother's socio-economic status was -0.0754, the standard deviation was 0.9176.

Family socioeconomic status was represented by the mean of the father's and mother's Socio-economic status. Where there was no father in the home, SES determination rested solely on the mother's socio-economic status. Where the mother had no occupation other than housewife, SES determination was the mean of the three remaining factors. A high SES was represented by a high score.

For the total sample of 3570, the mean family Socio-economic status was -0.0428, the standard deviation was 0.8145.

Appendix E (Continued)

Family financial status as a variable represents a child's answer to the question:

Which of the following best describes your family's finances?

____ (1) Barely able to make a living
____ (2) Have the necessities
____ (3) Comfortable
____ (4) Well-to-do
____ (5) Wealthy
____ (6) Extremely wealthy

Thus, a high score represents a high family financial status.

For the total population of 3500, the mean family financial status was 2.57, the standard deviation was 0.84.

The variable called "communication and transportation devices owned" is a mean of 3 z scored variables. These three variables represent family ownership of telephone(s), car, and television(s), radio(s), and phonograph(s). A low score on this variable is indicative of ownership of none of these devices.

The questions from which this variable was derived are:

How many cars, trucks or station wagons do you own? Include your own as well as any owned by your husband, parents, or brothers or sisters living in your home.

____ (1) None
____ (2) One
____ (3) Two
____ (4) Three
____ (5) Four
____ (6) Five or more

Does your home have a telephone, television set, radio, phonograph?

____ (1) None
____ (2) One
____ (3) Two
____ (4) Three
____ (5) Four

Appendix E (Continued)

Each variable was converted to a z score by subtracting the mean and dividing by the standard deviation, yielding scores scaled to have a mean of "0" and a standard deviation of 1.0. For telephone the mean was 1.30, the standard deviation 0.46. For cars, the mean was 2.11, the standard deviation 1.01. For the third variable the mean was 3.64, the standard deviation 1.05.

For the total population of 3615, the mean "communication and transportation devices owned" was 0.0150, the standard deviation was 0.820.

The variable, Space index, was derived from the following question:

How many rooms are in your home? Count only the rooms your family lives in. Count all rooms; bedrooms, bathrooms, kitchen, living room, dining room, recreation room, enclosed porch, etc.

____ (1) One
____ (2) Two
____ (3) Three
____ (4) Four
____ (5) Five
____ (6) Six
____ (7) Seven
____ (8) Eight
____ (9) Nine or Ten
____ (10) Eleven or more

The space index was obtained by taking the ratio of number of persons in the family divided by the number of rooms available. This ratio was then subtracted from a constant 10, in order to keep all numbers positive with larger numbers indicating more space per person. For example if a family with five people had five rooms then the ratio would be 1.0 and when subtracted from 10 the Space Index would be 9.0. Hence families with Space Indexes of greater than 9.0 have more than one room per person, those with Space Indexes lower than 9.0 have fewer than one room per person. The mean space index for the total population of 3521, was 8.99, the standard deviation was 0.72.

Another socio-economic variable, Total years mother worked, was determined from the child's answer to the following question:

How long has your mother been working for pay?

____ (1) She has not done this
____ (2) 1 year or less
____ (3) More than 1 but less than 3 years
____ (4) More than 3 but less than 5 years
____ (5) More than 5 but less than 7 years
____ (6) More than 7 years

The mean "total years mother worked" for the total population of 3019 was 2.75, the standard deviation was 2.05. A high score indicated a long time work history.

Appendix E (Continued)

Socio-economic status used as a main effect required recoding of the family SES variable. Socio-economic status was recoded into 5 categories, based on the mean and standard deviation of the main variable. The lowest SES category was coded as 1, the highest as 5.

Scores less than $\bar{X}$ - 2 s.d. were coded as "1"

Scores from $\bar{X}$ - 1 s.d. to $\bar{X}$ - 2 s.d. were coded as "2"

Scores from $\bar{X}$ - 1/2 s.d. to $\bar{X}$ - 1 s.d. were coded as "3"

Scores from $\bar{X}$ + 1/2 s.d. to $\bar{X}$ - 1/2 s.d. were coded as "4"

Scores greater than $\bar{X}$ + 1/2 s.d. were coded as "5" (This truncation of the upper SES categories was necessitated due to the small number of cases falling above 1/2 s.d.)

Religion was recoded from the following question:

To what religion do you belong?

____ (1) Catholic
____ (2) Catholic and Spiritualist
____ (3) Spiritualist
____ (4) Protestant (if your answer is Protestant, indicate to to which sect you belong)
____ (5) Protestant and Spiritualist
____ (6) Other (Specify) ____________________
____ (7) I believe in God, but I don't like organized religion.
____ (8) I don't believe in God or any religion

In the recoded form categories 1 and 2 were coded as Catholic (1); Categories 4 and 5 were coded as Protestant (2); and Categories 3, 6, 7 and 8 were coded as Other (3). The mean "religion" for the total population of 3481 was 1.58, the standard deviation was 1.33. There were 85.9% Catholics, 13.9% Protestants and 0.2% other in the sample.